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ABSTRACT

This report summarizes the findings and recommendations of a task force that studied the role of the National Institute of Education (NIE) regarding curriculum development activities in the United States. Primary purpose of the report is to identify and recommend policy options to guide NIE's curriculum development activities. Part 1 contains a variety of findings related to various curriculum development approaches and the role of federal and other educational agencies in curriculum development. Part 2 provides a series of policy options for NIE and discusses some possible consequences of each policy. Part 3 presents the policy recommendations of Harold L. Hodgkinson, at that time the director of NIE, along with a supporting rationale. (JG)

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NIE'S ROLE IN CURRICULUM DEVELOPMENT:
FINDINGS, POLICY OPTIONS, AND RECOMMENDATIONS

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PREFACE

In September, 1975, the National Council on Educational Research (NCER), the governing body of the National Institute of Education (NIE), passed a resolution requesting, "...the preparation of contending, informed 'briefs' on the value of curriculum change as an aid to schools, and for systematic public discussion of the briefs." The NCER subsequently modified this charge to include the formulation of a policy to guide NIE's curriculum development activities. In November, 1975, a Task Force was appointed to carry out these charges, and in the ensuing months conducted a number of activities: review of relevant literature; discussions with members of 37 professional and lay organizations; the commissioning of 27 papers by scholars, practitioners, experienced curriculum developers, and policy analysts; the convening of a three-day national conference in Washington; the sponsorship of four public meetings across the country; and a mailing of a set of "Guides for Public Discussion" to a sample of the membership of seventy-seven organizations (See the appendices for further details).

This report, which is based on the above activities, summarizes the results of the Task Force's work and provides some of the analyses requisite to NCER's policy deliberations. Part I contains policy-relevant findings. Part II provides a series of policy options with some possible consequences of adopting each. Part III presents the NIE Director's policy recommendation and a supporting rationale.

While this report necessarily concentrates on issues most relevant to NIE policy-making, we hope in subsequent reports to mine more fully the additional potential of our data for illuminating much of the richness and complexity of the wider debate over curricular issues. We also recommend to interested readers these other products, written or commissioned by the Task Force:

"Current Issues, Problems, and Concerns in Curriculum Development", the first report of the Task Force; the NIE "Guides for Public Discussion" of curriculum issues; proceedings (summary and extended versions) of the NIE Curriculum Development Conference; summary reports of each of the four public meetings; and abstracts of the commissioned papers (Duplication costs prohibit gratis distribution of complete sets of the papers, but they will be available through ERIC, and many of them will appear as chapters in forthcoming books).*

Before beginning, some remarks about terminology are in order. In general, we have discovered that problems of meaning plague curriculum discourse. The cry, "Define your terms!" is well taken, but misses the point made by modern philosophers of language that no stipulation of terms, however complex, is satisfactory for all the language contexts in which those terms are used. The semantic space of curriculum discourse has been mapped and re-mapped, but, to paraphrase, never have so many said so much to so little avail and with so little agreement. We address this problem first by making some initial distinctions, but more importantly by pointing, as we go, to agreements, disagreements, and some simple understandings often confused by the use of language.

At the heart of curriculum discourse are the terms "curriculum", "curriculum development", and "instruction", and considerable discussion among educators concerns the meaning of each of these terms. Meanings change over time, too, so that the term "curriculum " which once

*Products and additional information may be obtained by writing to: Jon Schaffarzick (Chairman) or Gary Sykes (Vice Chairman), NIE Curriculum Development Task Force, NIE, 1200 19th St., N. W., Washington, D. C. 20208 referred to course content, now means "all learning experiences" to some people. We shall say more below on the implications of various meanings for these terms, but here we stipulate the definitions of some terms we will use repeatedly throughout this report. Our definitions are as follows:

- *curriculum*: the intended outcomes of instruction (i.e., all knowledge, abilities, skills, attitudes, values, behaviors and other attributes intended for acquisition by learners)
- *instruction*: the process of providing opportunities to learn the curriculum (i.e., to acquire the intended outcomes)
- *learning*: the process of acquiring knowledge, abilities, etc., whether intended or unintended
- *instructional programs*: embodiments of the curriculum in the form of plans (e.g., designs, goal statements, objectives, guides, descriptions, explanations, instructions) and materials (e.g., textbooks, films, filmstrips, slides, maps, workbooks, ditto sheets, etc.) for use in instruction
- *research*: the conduct of systematic inquiry
- *development*: design and production of instructional programs
  - *prototypic development*: design and production of an exemplary part of an instructional program (e.g., a one-week unit in a two-semester course) to serve as a model for continued development
  - *full-scale development*: design and production of a complete instructional program
- *evaluation*: the process of assessing the quality and effectiveness of instructional programs
  - *formative evaluation*: the process of assessing instructional programs to aid developers in improving them
  - *summative evaluation*: the process of assessing the quality and effectiveness of final versions of instructional programs in order to inform those who must make adoption/rejections decisions

dissemination:	the process of making available (a) information about instructional programs, including evaluation results and/or (b) the instructional programs themselves
implementation support:	the process of assisting adopters in preparing to use an instructional program and/or in the actual use of the program

We finally require a generic term to refer to the full range of curriculum-related activities which NIE might sponsor. Such activities include research related to curriculum, development, evaluation, dissemination, implementation support, and any forms of assistance to others who conduct these activities. To cover all such activities we use the formal term "instructional program improvement" in the policy language of Parts II and III, and the informal term "curriculum activities" in Part I.

I. Analysis And Summary Of Task Force Findings

A. INTRODUCTION

We borrow a medical analogy to organize this part of the report: Analysis yields Diagnosis which leads to Prescription. In the Conclusion we point to the major implications of the foregoing which, in our judgment, are most salient to the formulation of NIE policy. The analysis section is further divided into several major subsections: roles in curriculum development, conceptions of curriculum, approaches to educational improvement, and estimates of resources required for instructional program improvement. Within each of these sections we will indicate, where appropriate, major lines of convergence-divergence, prominent value orientations which underlie positions and arguments, and some persistent dilemmas of curriculum development and decision-making.

B. ANALYSIS

Roles in Curriculum Development

We noted in an earlier report that, "... concern for 'who should make curricular decisions?' appears now to take priority over the question 'what shall be taught?'". This conclusion stands. The greatest volume of discussion centered on the questions of who can, wants to, and should conduct curriculum activities, accompanied by claims about who is currently so engaged. Our report begins with a discussion of these questions to reflect their importance today, and to introduce the cast of characters involved in the drama of educational improvement. The order of introduction is arbitrary and does not covertly signal "importance".

Federal Agencies

A major source of dispute centers on the proper Federal role in curriculum activities. Proponents of a strong role claim that Federal leadership is needed:

1) To address matters of clear national interest. For example, the National Science Foundation (NSF) initially conceived its course content improvement projects as a necessary element of the national defense, and as a means of supplying skilled manpower to our economy. If the U.S. is to maintain scientific and technological superiority, the argument ran, math and science programs in the nation's schools must be up-to-date and superior in quality.

2) To pursue national goals. For example, the legislation creating NIE establishes equality of educational opportunity for all children as a major goal of the Institute. Insofar as instructional program development is an effective means of realizing this goal, NIE is justified in sponsoring such development.

3) To provide a wide array of instructional materials for a rapidly changing, pluralistic society. A number of participants at our national conference argued for Federal sponsorship of curriculum development to provide (1) a multiplicity of programs varying in methods, goals, and subject matter from which states and localities might choose, and/or (2) programs which accommodate the diversity in subcultures.

4) To meet minority needs. This is especially critical when the market for materials is too small to justify a commercial investment. One such case involves members of minority groups. For example, a number of Native-American groups (e.g., the Nez Perce Tribe, the Shoshone-Bannock Tribes, the Idaho Inter-Tribal Policy Board, and the Sahaptin River Tribes Consortium) argued strongly at the Portland Public Meeting for Federal support of community-based, multi-cultural curricula. Another case may be in subject areas such as aesthetic education where the materials market may be small, but is not confined to a particular minority group.

5) To upgrade the content of instructional programs on the basis of advances in knowledge. This rationale, proposed by Tom Green (Syracuse University) among others, also underlay the work of NSF and can be extended beyond mathematics and science content to other fields and disciplines.

6) To provide coordination among the various agencies who sponsor and conduct curriculum activities. A serious impediment to educational reform and renewal is the inadequacy of coordination and communication among levels of government, often leading to duplications and gaps, cross-purposes, and so on. The Federal Government is in the best position to coordinate activities between the various levels of government. Many state and local spokesmen have called for such assistance, cautioning only that "coordination" not involve regulation and control.

7) To supply the high quality instructional materials not produced by the publishing industry and/or to induce the publishing industry to produce better quality materials. This argument rests on two assumptions, that current instructional materials are generally not of the highest quality, and that the major source of instructional materials, the publishing industry, lacks incentive to improve. Jerrold Zacharias of the Education Development Center, for example, judges that many materials, especially tests, are of low quality today. While he argues for direct federal intervention, others prefer indirect federal intervention in the form of incentives to publishers.

8) To stimulate innovation and risk-taking. Some argue that only the Federal Government can afford -- politically and financially -- to sponsor innovative programs and practices. Without such sponsorship, many creative, promising ideas would go undeveloped and untested. Peter Dow (Education Development Center) makes this case in a memo to the Task Force: "... innovation is almost never cost-effective in the short-run. It involves a high degree of risk and a disproportionate degree of failure ... the only real hope for innovation in education is through government subsidy."

These appear to be sound arguments, based on conceptions of what the Federal Government's role has been, what it should be, and what Federal sponsorship alone can accomplish. But other observers — those with contrasting views on the same topics — offer what appear to be equally sound arguments against a strong Federal role. These analysts, like those on the other side of the issue, are not of one voice: some would prefer to eliminate Federal activity entirely, others to restrict Federal involvement in various ways. All in all, though, they argue that limiting Federal involvement is necessary:

1) To promote local control and priority-setting. The Federal Government, some contend, is too remote to respond adequately to local needs, problems, and priorities. Among others, the Curriculum Committee of the National Association of Secondary School Principals expressed this point, arguing that the need for flexible, immediate response to local problems is not well-served by Federal initiatives designed to alleviate last year's problems. Others make this argument from the standpoint of right rather than of pragmatism. Several parents at our conference claimed that Federally-sponsored curriculum development has often resulted in the imposition of "elite" values on local communities, and that such imposition is an unconstitutional denial of freedom.

2) To return control of education to the states. Education is of course a state responsibility under the Constitution. Past Federal curriculum reform efforts, this argument goes, have by-passed the states, prompting calls either for cessation of Federal curriculum reform, or for Federal-State partnerships. Joseph Cronin, Illinois State Superintendant of Education draws attention to this issue with the rhetorical question, "Should the junior partner (i.e. the Federal Government) take over the firm?"

3) To reduce control over educational reform by elite groups with special influence over Federal curriculum efforts. Federally-sponsored curriculum development, this argument runs, fails to serve the public interest because certain individuals and special interests control the Federal agenda, consistently biasing reform efforts in favor of certain social and ethical values touching both public and private morality. Donald Barr, headmaster of the Hackley School, argued this point strongly in his paper.

4) To reduce financial inequities based on larger school districts' skills in obtaining Federal funds. Savvy "grantsmen" are generally available only to larger school districts who can afford them, and so, the old story, the rich get richer. We heard this argument from a number of teachers and administrators, notably at meetings sponsored by the International Reading Association and the National Association of Elementary School Principals.

5) To reduce the fickle pursuit of fads and instant panaceas which have diverted educators in recent years from a proper emphasis on academic excellence. Proponents of this view, such as LITE ("Let's Improve Today's Education", an Arizona parents' group) point an accusing finger at the Federal Government which they see as the chief source of the fads and frills wrapped in Federal dollars which distort local priorities.

6) To allow free market solutions to problems of supply/demand in the instructional program area. Publishers argue against government intervention on the grounds that the publishing industry is responsive to consumer demands, that Federally-sponsored programs frequently enjoy an unfair competitive advantage, and that the infusion of Federal dollars in implementation and other activities distorts consumer demands.

7) To reduce inefficiency, waste, and duplication. James Squire (Ginn and Company), for example, indicated in his paper that NIE development efforts tend to duplicate what is already underway elsewhere.

In sum, opponents of Federal involvement in curriculum development argue first that such involvement transgresses the division of power established by the Constitution, and second that the detrimental effects of Federal initiatives--whether in the name of equality, defense, or protection of minorities--outweigh the advantages. We note, though, that disagreements over the Federal role concern ends as well as means. Both proponents and opponents of the Federal role value equality, but proponents justify Federal involvement in pursuit of this value, while opponents tend to caution against Federal involvement as it curtails another cherished value: liberty. At the same time, the two sides debate the efficacy of Federal curriculum activity as a means for realizing these goals, particularly that of equality of educational opportunity.

The Publishing Industry

At the center of curriculum development conceived as the production of instructional materials for teachers and students is the publishing industry, composed of some 150 companies. The elementary-secondary market is variously characterized as fragmented and highly competitive, or as concentrated in the hands of large companies who compete with one another. (In 1975, seven firms had approximately 60% of total industry revenues). About two matters, though, there is little disagreement: publishers supply the great bulk of materials used in schools, and instructional materials, especially textbooks, structure most classroom activity. Kenneth Komoski (Educational Products Information Exchange) estimates that 95% of all classroom time involves use of textbooks.

As we have seen, claims about the quality of commercially produced materials and about publishers' capabilities are central to the debate over the Federal role. If publishers can and want to produce high quality materials and if they well serve the needs of diverse populations, this seriously vitiates the argument for a Federal role in curriculum development. Consequently, arguments for a Federal role in instructional materials development generally include assertions about publishers' capabilities. Following, then, are some often-mentioned constraints which some see as limiting what publishers are capable of producing:

- Market demands, articulated through mechanisms such as state textbook adoption boards, conduce to the production of bland, inoffensive widely acceptable materials. Of the twenty-two states with textbook adoption boards, two -- Texas and California -- exert disproportionate influence owing to the size of the market in those states. The result, some claim, is a uniform curriculum. Because publishers can generally afford to produce only one version of materials, "Maine must buy what Texas wants." This tendency, notes Arnold Grobman, Chancellor of the University of Missouri, St. Louis, is most marked in courses of significant social and political content.

- Insufficient risk capital prevents investments in development of innovative programs by all but the largest publishers. The publishing industry operates on a low profit margin, relative to other industries. Consequently, publishers are wary of investing in innovations if they are unlikely to recover the initial, heavy costs of development.

- Publishers, some contend, can't afford the extensive research, field-based development, and careful evaluation which for some is the essence of high quality curriculum development. Products and developmental processes lack important hallmarks of quality, claim Richard Schutz (Southwest Regional Education Laboratory) and others.

- As we have noted, publishers also cannot supply materials under circumstances where costs of development exceed profits available where demand is limited.

Not all agree with the foregoing analysis of publishers' capabilities. We cite the judgment of Lawrence Fish and his staff at the Northwest Regional Education Laboratory, for example, that, "Publishers have done a commendable job in preparing basic large-volume materials". Others point out that, because publishers are responsive to the market, they are not prone to invest in and promote fads. What some label timidity and conservatism others call sound judgment; one man's innovation, it appears, is another man's fad. Furthermore, if the market for a new program is substantial, publishers can and have invested in carefully sequenced, thoroughly evaluated development. Perhaps, though, the problem may not be who can do the job, but the job itself. Wilbur Schramm years ago had this to say (only partly facetiously) about textbook publishing:

> Technologically, the problem is to produce a teaching tool, usually within the restrictions of the printing process, which will offer the maximum of guidance to those who need it, the maximum of freedom to those who can use it, the utmost in learning ease to slower students, the utmost in challenge to swifter ones, and withal maintain a delicate balance between conservatism and change (Schramm, 1955, p. 129).

Another series of claims focuses on the supply rather than the production side of the publishing industry. Decker Walker of Stanford University notes in his paper that the packaging, marketing, and distributing of materials for schools throughout the country requires a nation-wide business organization, and that publishers have such organizations already established and operating. Along these same lines Lawrence Senesh (University of Colorado) suggests that publishing company salesmen are the most important link between innovators and teachers.

What are the policy implications of these various claims about publishers' capabilities? Some serve to justify Federal sponsorship of instructional program development with arrangements to market the products commercially. Others, though, suggest that the government should provide incentives for publishers to develop limited market and innovative materials, while state representatives (e.g., the Council of Chief State School Officers, and the Education Commission of the States) argue for strengthening state capacity to disseminate new materials. We end this section by proferring yet another opinion:

> The case for for-profit supply is strong where the good or service in question is easily evaluated by consumers, and there is considerable competition among suppliers. Where these conditions do not hold there is good reason to adopt regimes of supply organization that can internalize, to some extent, the demanders' interests -- governmental or not-for-profit forms...(Nelson, 1976, p. 397)

The optimum relationship between the Federal Government and the publishing industry is clearly a matter of dispute, with no evident basis for consensus.

Teachers And Other Professionals At The Local Level

On one point at least, people express near-unanimous agreement: the importance of the teacher in the educational process. While good instructional materials may facilitate good teaching, in the absence of good teaching, good materials alone are of little use. Everyone preaches the gospel of teacher involvement in curriculum development, but a little probing reveals that what people mean depends on how one defines "involvement" and "curriculum development."

At present, the teacher's typical mode of involvement in "curriculum development" is to select and adapt instructional materials for use in his/her particular classroom. The process of adapting materials fashioned elsewhere has not been studied or defined carefully, but probably covers everything from creating a unique, innovative program out of bits and pieces of many pre-packaged materials to leading students step-by-step through a textbook in accordance with the teachers' manual. While some (notably David Hawkins [University of Colorado] in his paper and Lillian Weber [City College of New York] at our conference) argued that teachers should have a more active role in creating materials, most discussion centered on teacher capabilities in developing and adapting materials. The prominent views:

> Individual teachers working on their own can no longer produce materials of comparable quality to those developed by specialists whose training and experience provide them with the necessary competencies. Decker Walker, Samuel Postlethwait (Purdue University) and Richard Schutz each made this point.

- Teachers ordinarily do not have sufficient experience to develop teaching strategies, to judge student readiness and to adjust and adapt materials to local needs. Teachers tend to follow in rote fashion the teacher's guide. Lawrence Senesh stressed these assessments in his paper and at the conference.

- Teachers often do not have adequate command of the subject matter they teach, a point made by Robert Davis (University of Illinois) and Frank Chase (Dallas Independent School District) among others.

- Teachers tend not to experiment actively with new methods, procedures, and subjects. Innovations fail at the classroom door, suggested Larry Cuban (Superintendent, Arlington, Virginia School District) in his paper.

- Teachers cannot judge, and do not demand, diverse, innovative and high quality instructional materials, claimed Lauren Resnick (Learning Research and Development Center) in her paper.

Response to these indictments of teacher capabilities took several forms. People at many of our meetings claimed that teachers excel at adapting materials for use with particular children; this is their forte and the primary reason for involving teachers in creation of materials. They understand what "works" with particular children. Teachers do resist imposed change, though, claimed David Darland of the National Education Association, suggesting that past attempts to implement innovative materials have been heavy-handed. In her version of the conference proceedings, Nel Noddings suggested that teacher participation in curriculum development is best considered a variable, dependent on the attributes (e.g., enthusiasm, energy, creativity) of individual teachers, and on competencies which can be developed. Her point leads to another major response which is to locate the reasons why teachers lack certain competencies. Among the reasons given:

> Inadequate pre- and in-service teacher training. Judgments here include Madeline Hunter's (University Elementary School, UCLA) claim that, "Teacher education is hopelessly obsolete and non-functional" as well as similar but less harsh assessments by Lawrence Senesh, Elton Hocking (Professor Emeritus, Purdue University), and David Hawkins.

- A second major class of factors relate to the conditions under which teachers work. Larry Cuban, citing the recent work of Daniel Lortie, pointed out two major constraints which affect teacher capabilities: Teachers must work with "draftees" present by law, not volition, and they must teach groups not individuals. Samuel Postlethwait added two further characteristics of teaching as a profession: the lack of incentives to improve or to innovate, (promotion usually means leaving the profession) and the lack of support services or resources (teachers are the most isolated of all professionals).

- A third perceived source of teachers' shortcomings as curriculum developers locates the problem in the prevailing mode of teacher training and support. This claim asserts that "the system" produces trained incapacities. In particular, the dominant mode of curriculum reform in the sixties taught teachers to rely on prepackaged wisdom. "Teachers will be most helped", writes David Hawkins, "Not by being given highly detailed specific curricula to follow but rather by being given help in developing wider repertoires, alternative ways of adapting the generic curriculum."

Discussion of the teacher's role in curriculum development leads most often to recommendations to improve teacher training and staff development and to involve teachers in development. By this second recommendation, though, some refer to improvement of teachers' abilities to identify, select, and adapt materials developed elsewhere, while others want to involve teachers in the design, creation, and iterative trial of materials. We further distinguish the practice of involving some teachers in the production of materials for mass distribution (an aspect of many large-scale centralized development efforts), from the principle of involving teachers in materials development because such involvement improves their teaching and expands their competencies. To put this principle into practice generally requires some form of indigenous, site-specific development. To reiterate, how one involves teachers in curriculum development depends on one's conception of "involvement," "curriculum," and "curriculum development," subjects we address more thoroughly in the next section.

While our data contain less discussion of the role of other professionals at the local level, numerous sources in the literature point to the importance of school principals and district superintendents in promoting educational improvement (see works by House, Carlson, etc.). The principals we spoke with at the National Association of Secondary School Principals meeting emphasized this point: dynamic local administrators are critical change agents, and without their support and cooperation little curriculum reform is possible. In particular, local administrators are judged to play key roles in staff development--so important during a period of little staff turnover--and in mediating conflict between the staff and the public. On this latter point, a dispute centers on the extent to which administrators respond to public demand or shield staff from public opinion. William Boyd (University of Rochester) describes a zone of tolerance within which administrators can freely operate, but beyond which they become vulnerable. Others, especially participants at the National Conference on Parent Involvement, have charged that administrators are gatekeepers who use the claim of professional competence to exclude parents from real participation in decision-making. We suspect that administrators like teachers, vary in the extent to which they value and solicit community involvement.

State And Regional Agencies

A recent trend in education has been the increase in activity at the state level. One stimulus for such growth has been the creation of Federal programs administered by the States accompanied by Federal funds channeled through the States. Moreover, State legislatures have become increasingly active, as have State judiciaries. New laws and court rulings, as Tyll Van Geel (University of Rochester) documents in his paper, have had a major impact on the school curriculum. For example, many states are specifying competencies necessary for graduation; others are instituting state-wide testing systems; and still others mandate parent involvment as a condition for both categorical and block grants. As we learned from our meeting with the Education Commission of the States and from Joseph Cronin's paper, the states clearly want a more active role in education, and we may expect this trend to continue.

State spokesmen generally stake a claim for certain curriculum-related activities, and often request that NIE provide various types of support and assistance for state-initiated activity. In particular, states have become more active in goal-setting and needs assessment, dissemination activities, and evaluation. Few state initiatives in the development of materials came to our attention, and there is reason to believe that the textbook adoption board is the major state mechanism for controlling the school program. Cronin, citing the work of Goodlad, also recommends that state-sponsored intermediate service agencies are a growing and valuable addition to the network of educational support agencies. County and regional institutions have the advantage of being closely in touch with district needs and priorities, while possessing sufficient resources and flexibility to offer unique services to teachers and administrators.

Some observers regard this increased state activity as a mixed blessing. Local teachers and administrators are wary of any regulation, whether from State or Federal government. Social studies teachers in New Mexico and mathematics teachers in Florida expressed to us some dismay at laws passed by state legislatures, and recommended that NIE might sponsor actitivies to enlighten state law-makers, who they claim often lack adequate knowledge of education and who often give too little serious thought to the consequences of the laws they pass.

Regional Education Laboratories, Centers, And Other Special Institutions

Regional Education Laboratories, University-based research and development centers, and private non-profit institutions such as the Biological Sciences Curriculum Study base their claims to conduct curriculum development on possession of a critical mass of experts having the requisite technical skills. Such claims are also based on a particular approach to curriculum development (although differences exist among such institutions) which is purported to have the following advantages (proposed, not suprisingly, by educators who have been or who are associated with such institutions, e.g., Richard Schutz, Lawrence Fish, Lauren Resnick, and Arnold Grobman):

- The functions of research, development, dissemination, and implementation are properly inter-related and coordinated;
- Materials produced are theory-based, and carefully designed, tested, refined, and evaluated;
- Institutions such as Regional Laboratories are in touch with local and state educators and can be maximally responsive to their curriculum needs and problems

As with claims made in favor of other interests, counter-claimants take their turn here too. We have heard, for instance, that the Federally supported Regional Labs and other institutions competing for government contracts represent a vested interest in curriculum reform and therefore will continue to press for support of more development regardless of whether or not such development is in the public interest. There is a dual animus for this argument: some, such as George Archibald (a conference participant and former aide to Representative John Conlan) desire to limit or eliminate the Federal role in curriculum development; others who support this view wish to shift Federal priorities from development to other R & D activities. A second argument against this claim to special expertise holds that products developed by "experts" are not significantly better than what publishers are capable of developing and do not justify the outlay of public monies.

Parents and Other Lay Involvement

As in the case of teachers, almost no one today disputes the proposition that, "Parents ought to be involved in curriculum development". This theme emerged clearly in each of the public meetings, and was as often expressed by "professionals" as by laypersons. We suspect, however, that this widely-expressed egalitarian affirmation conceals serious differences between lay and professional groups on the nature and extent of this involvement. As "participation" shades into "control", professional educators become restive, while less significant involvement leads to parental frustration.

Parental involvement today appears to have two faces. Many signs point to the renewed growth and vigor of parental involvement in schools. To an extent, Federal and State legislative mandates have stimulated this growth (e.g., Title I, Headstart, Early Childhood Education in California, recent provisions of legislation in New Jersey, etc.). The use of parent volunteers also is burgeoning (the first issue of the School Volunteer, newsletter of the National School Volunteer Program, estimates 2,271,000 volunteers in education based on a 1974 Current Population Survey, an ongoing U.S. Census Bureau activity). And the proliferation of local, indigenous parent groups (as evidenced by the National Committee for Citizen's in Education's expanding network of more than 150 such groups) marks renewed parental concern over such issues as basic education, bilingualism, citizenship education, etc. Yet, at the same time, the perceived erosion of local control creates suspicion and mistrust of State and Federal initiatives (a theme sounded at our national conference by James Mecklenburger of the National School Boards Association, as well as by several parents).

The picture today is indeed cloudy. Many commentators have remarked the growth of Federal influence over education in the last decade. We have just noted the more recent growth of State control, and now we suggest that local, community involvement is on the rise. Can everybody's power be expanding? William Boyd suggests a resolution to this apparent contradiction by noting that the balance of power in education is variable, depending on such factors such as the type of community, the type of issue, and the nature of sanctions/rewards which each group wields.

Our discussions with lay groups revealed two broad explanations for the lack of even greater parental involvement. Some parents stressed that the century-long process of bureaucratization, professionalization, and centralization in the public schools has produced closed institutions which do not permit, much less encourage, parental involvement. Others, however, noted that involvement in education is one of many claims to parents' time. Most parents, they claimed, do not wish to be actively involved and, at any rate, lack skills and knowledge to participate genuinely in schoolwide decision-making or in daily classroom activities.

These assessments probably are related: because educators for years have excluded rather than encouraged parents, many parents now lack both the inclination and knowledge about opportunities to participate; conversely, parent "apathy" convinces educators that parents have little desire to be involved. These tendencies historically have reinforced one another.

While we have spoken here quite generally about parent involvement, this discussion has specific implications for curriculum development. Spokesmen for parent involvement (e.g., the National Committee for Citizens in Education, participants at the first National Conference on Parent Involvement, the National School Volunteer Program, the National Coalition of Title I Parents, etc.) are unanimous in calling for the sponsorship of such activities as the development of programs to train parents, teachers, and administrators to work together in mutually reinforcing ways; provision of such training; research on the effects of parent involvement, etc.

Some General Comments on Educational Governance

A number of commentators -- Decker Walker and William Boyd among our commissioned writers -- have identified the "chaotic state of educational governance", as a major problem today. In the face of declining enrollments and shrinking funds, most groups have escalated their demands, each claiming a special legitimacy. Competition for scarce resources is pronounced, with no resource buffers and no institutional mechanisms to mediate and resolve conflict. We noted in our first report that all groups perceive that someone else controls the action; consequently, each special interest tends to press its claims vociferously, convinced that a vigorous and uncompromising stance is called for if it is to emerge with anything. This present day context exacerbates what Elliot Eisner has referred to elsewhere as "persistent dilemmas of curriculum reform".

Among such intertwined dilemmas confronting the Federal Government today, we note the following:

- The requirement to provide local communities with opportunities for determining what shall be taught to their children, and, at the same time, to draw on the skills and knowledge of social scientists, curriculum specialists, and educational scholars in building educational programs. This is the Dilemma of Involvement.
- The need to be responsive to a wide array of constituencies yet, at the same time, to chart a stable course for education, free from swings of public opinion and the fads promoted by professional reformers. This is the Dilemma of Stable Purposes.
- The necessity of achieving cooperation in the pursuit of national goals articulated by legitimate and representative bodies such as the Congress in the face of local priorities and goals which often conflict with such national goals. This is the Dilemma of Shared Purposes.
- The need to develop means for appropriately involving and striking a balance among all the claimants to a legitimate role in curriculum decision-making. Listen to their voices: "I know how to develop...". "I know how to teach this group of kids"; "I know what sells".... This is the Dilemma of Relevant Expertise.
- The need to respond to demands that Federal education agencies vigorously pursue national goals, while remaining within the limits established by our tradition of local control and by the Constitutional basis for education as a state responsibility. This is the Dilemma of Leadership.

Conceptions Of The School Curriculum

Conceptual Issues

We mentioned earlier that problems of definition plague curriculum discourse, and we intend here to address the more prominent of these problems, which condition answers to such questions as, "How should curricula be developed?", "Who should conduct curriculum development?", "What resources are needed?", and "What should be NIE's role in curriculum development?"

Sages through the ages have written volumes about curriculum, laying distinctions atop distinctions. We select only three issues here, though, each of which has a venerable history but is paramount in current controversies over the school program.

The first of these issues involves the meaning of the term, "Curriculum". For some, curriculum refers to course content usually expressed as subjects or topics to be covered, and/or the intended outcomes of instruction. Others consider curriculum to be instructional materials used by teachers and students: the curriculum is an object or a product. Still others, in the Deweyan tradition, equate curriculum with experiences, or opportunities for experiences, conceived in a number of ways: intended learning experiences or all experiences (intended and unintended) in the classroom or in the school or, finally, across all settings and throughout one's life. As this concept expands, the distinctions between curriculum and instruction, then curriculum and schooling, and finally curriculum and education progressively blur. Note also that curriculum conceived as experience is a process, not a product.

Proponents of one or another of these conceptions express no mere semantic preference, but deep ideological commitments to particular philosophies of education. To oversimplify the complex interaction between ideas, attitudes, and action, those who conceive curriculum as a product are likely to consider improving that product to be an optimal means of improving education. Those who conceive curriculum as a process involving idiosyncratic interactions between individuals, are likely to seek means of improving such processes, on the assumption that such improvements are as much a matter of craft or art as of science. As stated, of course, each position is a stereotype expressing an extreme orientation, and many development efforts transcend the distinction (e.g., as Nel Noddings suggests, curriculum as product, then process can be conceived as *stages* of development). Nevertheless, educators differ markedly in their orientations to such an issue, with improtant consequences, as we shall see, for their approach to development.

Likewise, one's definition of curriculum has implications for the settings to which one directs attention. Today the conviction grows that, as Ralph Tyler, Lawrence Cremin, James Coleman, Urie Bronfenbrenner, and other notable scholars have it, "education is broader than schooling". As a society, we have yet to fully explore the policy implications of this viewpoint for such institutions as the school, the family, the workplace, the mass media, and the community, but the harbingers of such an exploration are increasing (For example, see such recent reports as *Toward a National Policy for Children and Families*, *Youth: Transition to Adulthood*, *The Boundless Resource*, *The Reform of Secondary Education*, and the "Report of the National Panel on High Schools and Adolescent Education".)

Should NIE embrace such a broad conception of curriculum, and by implication broaden its scope to include R & D related to institutions other than the school? A recent report makes this case with respect to research, but in relation to development the answer is equivocal at best. Some argue that NIE, with its limited budget and legislative mandate, must focus on schooling. To attempt to influence education in non-school settings would fruitlessly dissipate already scarce resources. There are, after all, other Federal, State, and local agencies to address problems related to the family, the mass media, and so on. Others, however, see the lack of a concerted, well-coordinated approach to social reform as the chief impediment to gaining headway on a host of social problems. Most social problems are highly complex, and multi-determined so that piecemeal, small-scale interventions in particular social sectors (e.g. the school) are not likely to help.

The point to be made is that any recommendations about "the curriculum" or about "curriculum development" must be made in light of a conception of curriculum which quickly leads to such fundamental matters as one's philosophy of teaching, notions of learning, anticipations of social change, and the like.

A second major issue, one hotly debated at our conference, focuses on the relationship between school and society. Some argue that education must lead society, stimulate desirable social change and prepare students for a changed and changing society. Peter Dow used the term "subversion" to indicate that schools must promote value change; Paul Brandwein (Harcourt, Brace, Jovanovich) in his paper defined curriculum as, "... in a sense, the forcing of social change through technological change". Others expressed, equally vehemently the opposing view that education's purpose is to conserve and transmit the tried and accepted values of the existing society. "We don't want our children programmed for social change in our schools, with our money", asserted Judy Almquist, a parent attending the conference. As Nel Noddings noted in the conference proceedings, this conflict is so basic, and provokes such deep feelings that no resolution may be possible.

A third major issue concerns the question of uniformity or diversity in school curricula. One recommendation we have heard more than all others is that, "the Federal Government should promote diversity." However, what that means is not clear and depends on the meaning of "diversity." (Nel Noddings located five such meanings in use at the conference). Some who use the term refer to a desirable diversity in educational materials which have similar goals but which embody competing theories and methods (e.g., phonics vs. ITA approaches to reading). Others mean diversity in materials which strengthen and enhance cultural/ethnic diversity (e.g., bilingual and multicultural education). And still others refer to curricula which expand options for students. (One goal of the Social Science programs which Lawrence Senesh has developed.)

While we have heard many calls for diversity, some have used the term in yet another way and have argued against this type of diversity. A major concern expressed by teachers and administrators alike is that the curriculum is over-crowded, covering too much.

Teachers are required to pursue so many objectives and cover so many content areas, that there is insufficient time to devote to any goals. In this sense, the curriculum is too diverse.

Particularly in the basic skills, uniformity--conceived as outcomes of education to which all schools should devote significant time--is widely desired. Harry Broudy (University of Illinois) provided the note on which to end discussion of this issue, when he called for curricula to "unify the diversity."

Characteristics of the School Curriculum

Much of the testimony we have heard concerns characteristics of the school curriculum today. About some things there is consensus: the textbook still dominates instruction, and publishers supply the bulk of textbooks. About other questions there is less consensus: How much has the curriculum changed over time? Is the curriculum uniform or diverse? Has the curriculum led or followed society? Is the school curriculum today of high quality? We will deal briefly with each of these questions in turn.

Concerning the question of curriculum stability over time, most conferees concurred with Larry Cuban's idea that the answer depends on the level of change/stability you choose to analyze. Cuban notes in his paper that broad social, economic, and political trends and events do influence curriculum, that schools are vulnerable to change: "As waves of social change sweep across schools, each leaves a curricular residue...". However, he ultimately concludes that schools have exhibited a puzzling "structural continuity" over time: the basic arrangement of the classroom which structures the relationship between teacher and students has changed little over the past century. The bottom line, then, is that while reforms are frequently initiated and widely discussed, they are less often implemented, and rarely institutionalized. Stability, not change, is the overriding feature of the school curriculum. This conclusion is further substantiated by Boyd's detailed political analysis of the constraints on innovation, and by Raymond English's (Educational Research Council of America) list of ten obstacles to curriculum reform.

The above assessments generally rely on a broad conception of curriculum (e.g., Cuban defines curriculum as, "...intentional experiences within the school planned for students.") Those who claim significant success for curriculum reform (e.g., Ron Brandt [Lincoln, Nebraska, Public Schools], Richard Schutz, and Arnold Grobman among others) generally have a more restricted definition of curriculum in mind. For instance, John Wirt's (the Rand Corporation) forthcoming study demonstrates that the NSF-sponsored BSCS materials led to major revisions in the content of biology textbooks. Others argue that the past decade has witnessed a revolution in elementary and secondary science teaching based on such NSF-sponsored curriculum projects as the Physical Sciences Study Committee, the Science Curriculum Improvement Study, the Elementary Science Study, the Chemical Bond Approach Project, and Science: A Process Approach.

Those who make such claims usually conceive curriculum as a product (i.e., student and teacher materials); others argue, however, that the NSF sponsored science projects also influenced the process of science instruction, involving as they did hands-on-experience as a major element.

We reviewed above the arguments about the desirability of a uniform or diverse curriculum. But what in fact characterizes the school curriculum today? There is a dearth of evidence on the subject, but John Wirt's review of existing data leads him to conclude that, "...the actual curriculum in American Schools is highly uniform from school to school...". He notes for instance, that at the elementary level approximately two-thirds of the schoolday is spent on reading and mathematics. However, he also notes the extreme "diversity" in subject area coverage at the secondary level, a problem mentioned by many teachers and administrators, and the principal evidence for "diversity". As further evidence of regularity he points out that:

- courses are taught at standard grade levels.
- "...fewer than 10 percent of all textbooks on the market in a given subject area are used by more than 50 percent of teachers in that subject area."
- standard content is emphasized within subject areas.
- "...the verbal information level of cognitive functioning is much more strongly emphasized than are motor skills, intellectual skills, and cognitive strategies."

The evidence supplied in favor of the thesis that the U. S. curriculum is both uniform and stable suggests the answer to the third question we initially posed: the curriculum in fact conforms to broad social norms and standards, and is not a secret agent for social change. While we encountered little testimony to the effect that curriculum is a powerful agent of social change, various scholars have made such a case (see the recent literature review "Toward Comprehension of Curricular Realities" by Decker Walker for further discussion), and we cite only one such study: Inkeles and Smith studied the impact of various institutions on what they called "attitudinal modernization" in six developing countries. They found schooling to be the most powerful influence, followed by factory experience. Interestingly, though, they concluded that factors related to the social organization of the school (what some call "the hidden curriculum") were more potent influences than formal instruction in academic subjects.

Finally, as you might expect, we found considerable divergence of opinion over the quality of the school curriculum, which in turn influences opinions about the extent of reform deemed necessary. At one extreme, radical critics such as Ivan Ilich argue that society must be "de-schooled", that the very institution of compulsory, public school is pernicious to social and individual welfare. Somewhat less extreme is the view that, "...the entire curriculum K-12 should be restructured" proposed in a letter from Roger Van Bever, a Detroit supervisor of elementary science. Jerrold Zacharias also painted a bleak picture of the current school curriculum, with special emphasis on the detrimental effects which tests have on learning; he too sees the need for major curriculum reform.

Others, such as Ralph Tyler (Science Research Associates), argue that we should identify specific deficiencies in the outcomes of schooling, using National Assessment, Project Talent, and similar data, then remedy those deficiencies through selective development efforts. A fourth major position suggests that we need only to stress certain subjects (e.g., basic skills) and eliminate other emphases (e.g.,"psycho-social development") to improve the curriculum. Donald Barr and Robert Segura(Sacramento State University) among others expressed this viewpoint at our conference. Finally, some are generally satisfied with the school curriculum, but in light of publicity over declining test scores, this is a minority view. The most recent Gallup Poll noted a marked increase in the number of persons sampled who cite a poor curriculum as a major problem confronting the public schools.

Approaches to Educational Improvement

Another basic philosophical difference underlying curriculum discourse concerns attitude toward change. Arnold Grobman asserts that, "Curriculum revision is a never-ending process", while Donald Barr cautions against innovation for the sake of innovation. A middle-ground position calls for curriculum revision as the need arises. In the following discussion, then, which weighs the merits of various change strategies, we draw attention to the assumption that because change is inevitable it is good. By no means does everyone assent to this proposition.

Change Strategies Other Than Curriculum Development

Ideally our powers of analysis would be so acute, and our technology so advanced, that for any educational problem we could prescribe just the right cure. As it is, debates about means claim equal time with debates about ends. In this section, we touch briefly on non-curricular improvement strategies which various people have advocated. This discussion does not suggest the full range of educational improvement strategies because our inquiry focused on matters related to curriculum development. We therefore acknowledge this major limitation to our inquiry: we have nothing to say, for example, about such important matters as school finance, judicial and legislative processes, major social expedients (e.g., busing), school organization schemes (e.g., open education), and the like. Such significant school reform efforts were beyond the scope of our inquiry.

A major theme running through many discussions was that instructional program development should occur only in conjunction with other necessary activities to help teachers, parents, and others in adapting and using materials. Results from one of our discussion guide analyses (see Table I) demonstrate that a majority of respondents in each category (e.g., students, teachers, administrators) recommend that NIE offer training and technical assistance. (NB: Respondents could check more than one option, so that row totals sum to more than 100%. Also this is a non-random sample, and we caution against generalizing from these results). We infer that many educators regard the provision of new instructional programs as insufficient in-and-of-itself to improve education. Practitioners request direct services to support and improve their efforts.

Table I

RECOMMENDED ROLES FOR NIE IN SPONSORING DEVELOPMENT OF NEW CURRICULA

(Responses to "Guides for Public Discussion"; Question #2: "Should NIE Develop New Curricula?")

each cell shows:	
(raw no.)	row % / column %

Recommended Role for NIE in Curriculum Development

Type of Respondent		Number of Respondents Who Answered This Question	Nothing	Stimulate Others to Develop Curricula	Create New Approaches to Curriculum Development	Create New Examples (Illustrative Parts of New Curricula)	Offer Training And Technical Assistance to Others	Develop New Curricula (Complete)	Other
Laypersons*		(100) 100%/7%	(11) 11%/16%	(46) 46%/8%	(41) 41%/9%	(33) 33%/8%	(47) 47%/6%	(13) 13%/6%	(16) 16%/11%
Students		(12) 100%/1%	(0) 0/0	(5) 42/1	(4) 33/1	(2) 17/.5	(5) 42/1	(1) 8/.5	(2) 17/1
Professional Educators	Teachers/ Professors	(510) 100%/38%	(27) 5/40	(242) 47/40	(161) 32/35	(158) 31/39	(279) 55/38	(85) 17/40	(69) 14/46
	Specialists	(92) 100%/7%	(2) 2/3	(31) 34/5	(31) 34/7	(42) 46/10	(51) 55/7	(19) 21/9	(9) 10/6
	Administrators	(442) 100%/33%	(22) 5/33	(215) 49/35	(168) 38/37	(114) 26/28	(230) 52/32	(55) 12/26	(35) 8/23
	Others	(166) 100%/12%	(5) 3/7	(57) 34/9	(46) 28/10	(54) 33/13	(104) 63/14	(32) 19/15	(19) 11/13
Non Codeable**		(2) 100%/–	(0) 0/0	(2) 100/–	(1) 50/–	(1) 50/–	(1) 50/–	(0) 0/0	(0) 0/0
Unknown***		(13) 100%/1%	(0) 0/0	(4) 69/1	(5) 38/1	(3) 23/1	(4) 69/1	(3) 23/1	(0) 0/0
TOTALS		(1337) 100%/100%	(67) 5/100	(606) 45/100	(457) 34/100	(407) 30/100	(726) 54/100	(210) 16/100	(151) 11/100

* Laypersons include parents and interested citizens who did not also indicate that they held professional positions in education.
** "Non-codeables" include those who checked so many categories that classification was impossible.
*** "Unknowns" include those who failed to supply information about their positions.

Lauren Resnick stressed a related point in noting that, "Teaching materials are not in themselves curricula--if we mean by curricula everything necessary to foster learning". She goes on to suggest that, "...adapting instruction to multiple differences among children... almost always involve(s) substantial redesign of the social matrix within which instruction takes place". John Carroll (University of North Carolina) stresses the same point in noting that past large-scale curriculum efforts have failed to consider the role of new curriculum packages in the total school curriculum. Questions such as what students are likely to benefit, what prior learnings have students had, what overlap exists with other materials, and what other desirable materials will be displaced, should be raised as aspects of any adoption decision.

Many laypersons and educators stressed that the professional competence of teachers is the prime determinant of quality education. (A point of view ably expressed in the papers by Madeline Hunter, Samuel Postlethwait, and David Hawkins). For example, in a position paper to the task force, the National Education Association's Standing Committee on Instruction and Professional Development states that, "Teachers must have time and opportunity for direct involvement in curriculum development if schooling is to be more effective". Such a perspective leads to calls for the improvement of teaching through pre-and inservice training.

A third oft-stated theme is that more instructional materials are available today than practitioners know about or can possibly use. (Komoski estimates almost 500,000 separate curriculum programs on the market, not including what teachers and school systems develop on their own). This suggests that dissemination of information about what is available is a top priority. Many also recommend that evaluative information is needed to aid the materials selection process. Teachers in particular urged this role for NIE at meetings with the International Reading Association, the National Council of Teachers of Mathematics, the National Council of Teachers of English, and others. Currently, the Educational Products Information Exchange (EPIE) run by Kenneth Komoski, is the chief source of consumer-oriented information about instructional materials, but many educators are unaware of even this service.

This brief tour of improvement strategies other than curriculum development covers only some of the major, widespread ideas; we defer discussion of other recommendations to the "Prescription" section of the report.

Curriculum Development As A Change Strategy

> "More can be done to improve the quality of education through the development of improved instructional materials than in any other way".

> "Efforts in curriculum development have had relatively little influence in modifying the total effective school environment".

These two quotes, the first by James Squire, the second by David Hawkins, point out the range of opinion on the efficacy of curriculum development as a change strategy. As we have seen, assessments depend on what is being claimed: proponents of curriculum development as an optimal change strategy would surely argue that, "modifying the total effective school environment" is not the aim of many curriculum development projects, and so is an unfair measure of their success. Just as surely, opponents would dispute James Squire's global claim that curriculum development "improve(s) the quality of education". The significance of such statements, though, may not be in their validity as empirical claims, but in their expression of belief -- faith if you will -- about the most likely prospects for educational reform. In the face of equivocal and often-disputed evidence for every educational improvement strategy, educators must place their chips on one bet or another.

Claims about the efficacy of curriculum development depend first on one's approach to development, and in the years since Franklin Bobbitt and others pioneered the "science of curriculum-making" a variety of approaches have evolved (see Herbert Kliebard's paper for a brief historical overview). Variables such as project origin, funding source, nature and extent of innovation, project goals and outcomes, linkage between project and schools, and teacher role differentiate approaches. To demonstrate the dependence of claims about the effectiveness of curriculum development upon one's approach to development, we review the advantages claimed for two major approaches to development.

One approach regards curriculum as preactive, as learning opportunities embodied in instructional materials prepared prior to instruction. Such a conception rests on the hypothesis that carefully prepared materials are a significant determinant of learning (in conjunction with, not independent of, teacher utilization of the materials). Proponents (e.g., Richard Schutz, James Squire, Lauren Resnick) argue that this approach allows developers to:

- Capitalize on the necessary skills and knowledge of interdisciplinary teams of experts.
- Ensure proper attention to established principles of learning and instruction.
- Avoid the duplication and waste inherent in innumerable local development projects.
- Embody national perspectives in such value-laden areas as sex and race discrimination, bilingual education, and special education.

The second major approach considers curriculum as interactive*, the outcome of interactions among teachers, parents, students, and materials. Such an approach rests on the hypothesis that the preparation and use of materials within the context of purposes determined by the participants significantly enhances both the quality and the outcomes of instruction. Proponents (e.g., David Hawkins, Lillian Weber, and others) claim such an approach:

- Allows for and promotes the constant decision-making necessary to adapt to individual needs and circumstances.
- Stimulates creative, flexible teaching, an integral part of which is the creation and adaptation of materials to suit the emergent purposes of teachers, parents and students.
- Improves critical teacher competencies such as command of subject matter, ability to judge readiness of youth, skill in developing materials, and so on.

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*Nel Noddings uses the preactive-interactive distinction in the conference proceedings, attributing it to Philip W. Jackson, "The Way Teaching Is", in The Way Teaching Is (Washington, D.C.: ASCD, 1966), As we suggested above, these two approaches are not necessarily opposed to one another. Proponents of the former approach recognize that classroom interaction is critical and can design materials to be used flexibly and adaptively (the increasing production of "modules", "units", and "proto-type" materials rather than complete curricular packages testifies to this awareness on the part of developers). Likewise, those espousing the latter approach cannot do without some materials produced elsewhere. The policy implication of this difference in approaches rests on the fact that these approaches compete for scarce resources: some urge continuing Federal sponsorship of "professional" developers as a top priority (e.g., Richard Schutz, Jerrold Zacharias); others urge support and assistance to improve teacher and parent competencies in working with materials (e.g. a strong recommendation at each of the public meetings and in the National Education Association position paper.)

Claims about the efficacy of curriculum development also depend on the range of effects to which one attends. We have so far focused principally on teacher and student effects, but proponents suggest a series of collateral benefits for curriculum development as well (usually with the "preactive" approach to development in mind):

- Curriculum development explicitly raises important value questions, which people must confront. Developing new curricula is an excellent way to stimulate debate of value questions otherwise over-looked. (Michael Timpane [Rand Corporation] recommendations section of Conference proceedings.)
- Curriculum development serves educational research by generating research questions, providing ready-made, economic "treatments", and by instantiating theories and research findings (Lawrence Fish, Richard Schutz, Lauren Resnick).
- When referenced to use of specific instructional materials, teacher training is considerably improved. Consequently, curriculum development serves to facilitate teacher training (Richard Schutz, Samuel Postlethwait).

- Conducting curriculum development teaches us how to better conduct such activity. We learn by doing, and the sponsorship of curriculum development leads to improvements and innovations in the art and science of this activity (John Mayor, University of Maryland).

- "Curriculum development stimulates publishers to undertake programs they might otherwise have overlooked or resisted". (Quote from a letter to the Task Force by Howard Mehlinger, president-elect to the National Council for the Social Studies).

- "... national curriculum projects can affect not only the school curriculum, but also potentially affect the structure of the policy system that influences the school curriculum" (John Wirt). This claim is a major thesis of John Wirt's forthcoming study and refers, generally speaking, to the impact of large-scale curriculum development on such other determinants of the school curriculum as state-wide testing programs, college entrance requirements, state adoption boards, state curriculum law, and the like.

Estimates Of Resources Required For Instructional Program Improvement

Estimates of the resources necessary to carry out instructional program improvement figure prominently in curriculum discourse. We identify six types of resource which we will examine in turn: money, time, knowledge and technology, personnel, organizational arrangements to join and coordinate other resources in efficient ways, and political support to guarantee stable means and purposes. As we discuss each resource, we will point to what should by now be axiomatic: resource estimates depend on and vary according to such factors as one's conception of curriculum and curriculum development, the size of the target population, the extent to which proper use of the new program requires training, and others.

Money

Creation of instructional materials under optimal conditions (which includes assembling a critical mass of experts with a number of specialities, extensive pilot-testing and revision of materials, attractive packaging using modern media, and careful evaluation), is clearly an expensive enterprise. Development in this mode, as sponsored by the National Science Foundation or as conducted by a Regional Laboratory can and has cost several million dollars per project (discussing development of an elementary mathematics program for television, Jerrold Zacharias estimated the costs at $15 million over five years to produce the shows, the tests, and the teaching-learning guides). One such development project can consume a considerable share of an agency's budget, while such a thorough approach to development is unfeasible for all but the largest publishing firms.

Furthermore, activities necessary to ensure widespread and proper use of new materials cost even more. For example, Ralph Tyler's estimate, based on NSF-sponsored projects and on the extensive educational reform underway in Israel, is that, "...eight to ten times the funds used in constructing the curriculum have been spent in teacher's consultations and conferences and other means to help teachers implement the new courses." He goes on to note that past development efforts have seriously under-estimated implementation costs, a conclusion which Zacharias and Cronin confirm as well. If the Federal Government is to sponsor large-scale development efforts together with the associated teacher training, then it must be prepared to expend large sums of money.

If however, the Federal Government takes a different approach to curriculum development--sponsors local efforts for instance (a precedent being Title III of the Elementary and Secondary Education Act, funded at approximately $150 million annually in recent years, which provided funds for locally-initiated innovations)--how would the costs compare? This depends, of course, on the nature and extent of the program. With almost 17,000 school districts, though, even the meager provision of $1,000 per year per district would cost the government $17 million per year, a substantial sum. The obvious conclusion is that any development efforts intended to affect a substantial number of schools will be costly.

Time

Estimates of the time required to design and create a new instructional program (as opposed to revision or adaptation of materials already available) converge on 3-5 years (e.g. Decker Walker, Ralph Tyler) as a lower bound, and 10 years as an upper bound (e.g. Richard Schutz). Joseph Cronin similarly suggests that the textbook market is "responsive to urgent needs and popular mandates; within five years textbooks and kits reflect state priorities and federal stipulations because of dollar incentives". However, he also cites the research of Paul Mort to indicate that the spread of complex innovations such as the junior high school, or the provision of guidance counselling takes fifty years from initial adoption by one school to widespread acceptance.

Again, these estimates are referenced to a particular type of development (e.g. NSF-sponsored large scale projects) and we have no estimates keyed to other forms of development. Apparently, though, under-estimates of the time required to carry out curriculum development are as common as under-estimates of the money required.

Knowledge and Technology

Often overlooked is the requirement that there be requisite knowledge and technology to carry out (and to justify) curriculum development. Reference here is to several kinds of knowledge: theories in the disciplines on which to organize and sequence curricular content and on which to devise teaching strategies (e.g. Piaget's theory of child development); fundmental reorganizations of knowledge which suggest improved ways to organize school curricula (e.g., unified approaches to science); and knowledge of how to conduct such activities as needs assessment, materials design, evaluation, dissemination, and implementation. Likewise, the translation of theoretical knowledge into practical form (i.e., technology) is necessary. Frequently too, technological breakthroughs in other areas (e.g., telecommunications, computer programming) have significant implications for the formating and delivery of educational services.

Conversely, development in an area where the knowledge base is weak and/or where theoretical knowledge has yet to be translated into technology may yield poor quality materials which fail to justify the investment. Another perspective, however, views curriculum itself as a technology, the instantiation of research and theory. Development so conceived is an engineering experiment, a form of applied research which aims at the creation and improvement of educational technology. The policy implication of knowledge and technology considered as a resource is that a professional judgment of the keenest sort about the state of knowledge in a particular area is a necessary aspect of a decision to develop.

Personnel

Under dispute are both the competencies required to conduct various curriculum-related activities (e.g., needs assessment, materials design and formating, evaluation, selection and adaptation, etc.) and the distribution of these skills among laypersons and professional educators. Judgments about requisite competencies depend, again, on what activities one has in mind, and on how one believes those activities should be conducted. We have already reviewed the testimony which suggests that parents and teachers are currently ill-prepared in many ways; such an assessment leads to calls for better training and technical assistance. Likewise we have on record the assertions that curriculum development capabilities are concentrated in such places as Regional Labs, private non-profit institutions such as the Education Development Center, certain publishing companies, and in universities. The foregoing suggests a summary to the effect that while competencies to create instructional materials are concentrated in relatively few locations, competencies to adapt and use materials must be widely distributed but are currently under-developed.

Organizational Arrangements

Many have commented that the institutional segregation of such roles as sponsor, developer, evaluator, administrator, teacher, parent and student is a major obstacle to educational improvement. What we have termed the Dilemma of Involvement continues to plague attempts to organize these roles in mutually satisfactory and reinforcing ways. On one hand, curriculum development greatly benefits from the inter-disciplinary and inter-professional skills which are concentrated in universities, Regional Labs, and the like. On the other hand, many support the need to involve parents, teachers, and community members in some form, at some stage, or in regard to certain activities.

A major problem with centralized development projects is ensuring widespread proper use of the products: teachers may never hear about the availability of new materials or may attempt to use them, experience frustration, and reject them or adapt them improperly. There is widespread consensus, then, that failures in inter-institutional and intra-organizational arrangements have been a serious hindrance to educational improvement in general, and to curriculum development in particular.

Political Support

As we noted, many judge long term funding at significant levels a pre-requisite for quality curriculum development. Time and money are in turn dependent on sustained political support in the face of changing social purposes, uncertain short-term results, and (frequently) only the promise of long-term effects. Many observers have commented on the adverse effects of fickle political support, of educational bandwagons, and of the uncertainties and delays in funding cycles. The educational scene today is characterized by a large number of special interest groups, each with some ability to garner support, who vie with one another for resources. In such a situation, the Dilemmas of Stable, Shared Purposes are particularly difficult to reconcile.

The above resource types suggest that for at least two reasons curriculum decision-making is not--cannot be--a simple matter of cost-effectiveness trade-offs, or of purely rational calculations.

First, curriculum reform is an historical phenomenon, dependent on particular circumstances. The history of curriculum development, as Herbert Kliebard (University of Wisconsin) and Larry Cuban have pointed out, is a history of response to broad social, political, and economic forces and to particular events. Hence, political support for curriculum reform is unpredictable in both its strength and its duration. This has led to opportunistic efforts, difficult to sustain, which are soon superceded by new initiatives. John Wirt, among others, identifies a critical dilemma: "...while intense social problems clarify objectives and provide impetus for change, the curricula produced may turn out to contain solutions for problems that no longer exist if the time required to institutionalize them is too long." "There are many situations", writes Geoffrey Vickers, "In which to be systematically late is to be systematically wrong". (1970, p. 96).

Second, resource estimates rely on both technical/professional judgments and on political judgments, and our ability to make accurate estimates in both cases is limited. Does sufficient knowledge exist to warrant new development? Is a particular innovative proposal "promising" ? Is the temper of the times propitious for such development? We possess no technologies, have little empirical data, and a relatively short line of historical experience to facilitate such judgments. Even the "experts" will disagree, and such disagreements will rest both on matters of fact and of value; in such cases all manner of disputes--concerning both means and ends--are likely.

C. DIAGNOSIS

A full cataloging of diagnoses requires more detail than we can allow here. Furthermore, we would like to trace the paths along which particular conceptions of roles, of curriculum, and of educational improvement converge with estimates of resources to form particular diagnoses; such a task, though, is extremely complex and well beyond the scope of this inquiry. So, the diagnoses we identify serve only to suggest major variations in how people view education today; no group or individual argued any one of these diagnoses in pure form.

The first diagnosis gives the patient a more or less clear bill of health. Schools today, this argument runs, are probably having maximum effects, are organized in ways satisfactory to the majority of the clients, and require modest changes at most. Radical innovations, claim such spokesmen as the Arizona parents' group, LITE, will make marginal differences at best, so that Federal sponsorship of innovative projects is rarely in the public interest. Furthermore, in most cases the harmful side effects of most innovations far outweigh their advantages. We mainly need to eliminate superfluous content, goals, and activities from what some consider a bloated curriculum (e.g. Robert Segura at our conference). If we concentrate school resources on those goals for which a broad consensus exists, we can achieve them. Better to do some things well (e.g., teach everyone to read and write) than to attempt too much and fail at all things.

Consonant with this diagnosis is the pursuit of equal educational opportunity. Every child deserves the full benefits of schooling and where children are demonstrably not receiving such benefits, there we must target our resources. Such targeting of effort is essentially the position Ralph Tyler advocates in his paper.

A second diagnosis judges the past two decades of curriculum reform to have been inadequate and/or incomplete. The judgment of inadequacy rests on a number of claims already reviewed: that new curricula never reached the schools; that ways and means to integrate new curricula into ongoing systems of instruction received too little thought; that the theory and research base for many new programs was insufficient; that introducing new instructional materials alone has little impact; that the goals of curriculum reform did not even address the serious problems of education, and so on. A number of thoughtful writers join this chorus: John Carroll, Lauren Resnick, James Squire, Ralph Tyler, and Larry Cuban, among others. Many teachers and administrators at the various professional meetings we attended also stressed that curriculum reform had little direct impact. Frequently, they said, they were unaware of curriculum projects.

The judgment of incompleteness rests on the claim that funding was cut off before the job was finished. Elton Hocking in his paper makes this case for a number of foreign language programs; Jerrold Zacharias concludes similarly for a variety of mathematics/science programs.

Frequently these two judgments merge. That is, agencies allocated sufficient funds for development of materials, but not for dissemination and implementation support. Consequently, many inadequacies of past development efforts rest on insufficient support for the promotion and use of new materials in the schools. The question of use is particularly critical when changes in teacher behavior are necessary to the proper implementation of new programs. The issuance of a new textbook may require no changes in teaching style or methods. The teacher may have to master new concepts and become familiar with new content, but not alter his/her teaching behavior in significant ways. If, however, the essence of a new program is pedagogy, if it rests on a new theory or model of teaching, (e.g., science as a process of inquiry rather than as a body of knowledge) then "use" of that curriculum does not simply follow its purchase. Teacher (re)-training is an essential concomitant of "use" in this case.

What prescriptions does such a diagnosis lead to? Lauren Resnick in her paper, makes the extremely important point that the answer depends on your priorities, on the goals of education you establish. If, for example, the goal of mathematics instruction is computational skills, then investment in dissemination is warranted because proven materials already exist; if the goal is mathematical problem-solving, then research and development is the priority because we do not yet understand how children acquire such a complex ability. In short, the allocation problem is closely tied to the value problem which, for a funding agency, translates into political pressures brought to bear by conflicting constituencies.

A third diagnosis trusts that over the past two decades curriculum reform has been successful in realizing stated goals and in improving the quality of education in other collateral ways. However, our current assessment procedures--tests and other measuring instruments, evaluation designs, data analysis techniques, and the like--have been inadequate and misleading in identifying such improvement. We run the serious risk of allowing our crude, narrowly conceived evaluation efforts to determine the goals of education. In the absence of adequate technology, such innovations as state-wide testing programs and other accountability systems, and competency-based education are bound to exert a pernicious influence on the curriculum. Such a view, while ratifying investment in curriculum development, points more directly to improvement of evaluation methods as a top priority. Lloyd Trump of the National Association of Sceondary School Principals made a special plea for improved evaluation in his conference recommendation. As well, teachers and administrators in a variety of meetings also listed improving evaluation as a critical need.

The fourth and last broad diagnosis involves the governance of educational change, something of a catch-all which covers a multitude of problems. The most prominent of these follow.

Discussion at meetings with three major organizations of administrators (the American Association of School Administrators, the National Association of Elementary School Principals, and the National Association of Secondary School Principals) and with the Education Commission of the States converged on the problem of purpose as critical today. Administrators in particular are worried about the lack of consensus over the purposes of schooling, and about the continuously expanding expectations for the role of schools. They seek legitimate bases for decisions they must make on what courses to include, what content to cover, what skills to teach, what values to instil, and the like. This concern is directed not only to the present state of affairs, but to the future. Many administrators believe that school must prepare youth both for immediate conditions (e.g., the state of the job market in various fields) and for probable future states based on such trends as the changing role of women in our society, the approaching limits to economic growth, the increasing gulf between "have" and "have not" nations, the potentialities of further rapid technological change, and so on. The problem for today, though, seems to be not simply the temporary lack of consensus about the purposes of education; rather, we lack the political processes and institutional arrangements needed to achieve consensus. In the absence of stable, shared purposes, some argue, educational improvement may be impossible.

Questions about purpose give rise to a number of dilemmas, which we have previously touched on but have not made explicit. Stated baldly, three such dilemmas involve the need to:

- reconcile the simultaneous demand on schools to maintain society while responding to pressures for societal change.
- reconcile perceptions that the school curriculum is already too crowded with subjects and goals with the continuing calls for attention to new matters (e.g., energy education).
- reconcile calls to provide similar learning experiences for all children with calls to diversify learning experiences according to group characteristics (e.g., bilingual education) or to individual characteristics (e.g., individualized instruction).

A related issue centers on the basis for and claims about legitimacy. Legitimacy we define loosely as the agreement by members of a group (or polity) that those who govern do so rightfully. Grounds for legitimacy include tradition, expertise, legal contracts and processes, and the like. In practice, legitimacy is frequently related to effectiveness. If a leader is effective in realizing group goals, or delivering timely services, his/her legitimacy is rarely questioned. Today, though, in debates over the purposes and methods of education, challenges to legitimacy are widespread: "Professionals do not represent parent concerns"; "state legislatures do not represent local needs"; "Federal initiatives are intrusions into state and local affairs"; and "mobilized parent groups do not speak for the community at large". Such challenges vastly complicate the debate over the issues, and make any course of action problemmatic.

Coordinating the delivery of products and services between the various levels of government (and at the Federal level across agencies) and between the public and private sectors is another serious governance problem. Problems of gaps, duplications, cross-purposes and the like are legion. Inefficiency is the diagnosis in this case. Many have urged attention to this problem, but it has so far proven to be intractable. First, the Dilemma of Leadership may apply here. The concept of "coordination" is quite vague but is generally perceived as a benign function. In practice, though, Federal attempts to "coordinate" may be regarded at state and local levels as efforts to control. Interagency efforts at the Federal level are no less prone to such suspicions. Second, if we consider the dissemination of information as a principal strategy for achieving better coordination, the amount of information to disseminate, and the number of decision-makers to reach, is staggering. This problem of coordination is indeed serious.

Finally, we note that regulating the competition for scarce resources in the interest of both equity and efficiency is a significant governance problem. Daniel Bell estimates that 8% of the U. S. workforce is engaged in education-related work; Stephen Bailey estimates that 250-300 education-related special interest groups have offices in Washington. In the best of times such a large, varied concern would generate considerable conflict. Today, it appears that good will and compromise-thinking are shrinking as rapidly as resources. Where one expects alliances, one sees battle lines; where cooperation appears natural, and more, necessary, to achieve mutual goals, there is competition and conflict. We overstate the case, to be sure, and it is difficult to determine whether the "politicization of education" is a recent phenomenon or a recurring one in modern guise, but concern over this issue is evident (e.g., see the papers by William Boyd and Decker Walker).

D. PRESCRIPTIONS TO NIE

Recommendations which people have made to NIE concerning its role in instructional program improvement fall into two broad categories: procedures to follow in setting priorities, making allocational decisions, and distributing funds; and R&D activities to support, both in general (e.g., dissemination) and specifically (e.g., sponsorship of citizenship education). A full accounting of recommendations would require more detail than this report allows, so we will again oversimplify and suggest several broad classes of recommendations. In a later paper we hope to report to the NCER the specific recommendations for R & D which our inquiry elicited.

Procedural suggestions most often proceed from a concern over roles in the interest of legitimacy and equity. By far the most prominent recommendation of this type is to "involve" ________________ (fill in the blank with "parents", "teachers", "administrators", "state education officials", "scholars", etc., with each major interest advocating that it be consulted). Beyond such expressions of self-interest, however, there was broad-based consensus that laypersons and teachers in particular should be involved, generally in curriculum decision-making and specifically in project selection and funding decisions at NIE. This was probably the single most important theme of each public meeting, and emerged as well in many of the meetings with particular groups. Interestingly, few people recommended a more significant role for the student; students were present and spoke in favor of such involvement at the Philadelphia meeting; and Lillian Weber and Robert Davis discussed the necessity of involving students in curriculum development at our conference. Such expressions of concern, however, were few.

Other procedural recommendations made with some frequency included the following:

- fund localities directly (e.g., mini-grants to school districts, special grants to exemplary teachers, etc.) (meeting with the National Association of Secondary School Principals)
- increase the use of matching-fund arrangements with states and localities. (Gordon Swanson, University of Minnesota, in a letter to the Task Force)
- open the grant review and award process to greater public participation and scrutiny. (Tyll van Geel, in his paper)
- use funds in such a way as to create partnerships between Federal, State, regional and local agencies (Ron Brandt, in his paper)

A crude but concise way to classify recommendations on NIE's role in sponsoring R & D activities is to use the classic economic terms of production, supply and demand. A fourth broad mode of involvement, to continue the economic analogy, conceives NIE in the role of government vis-a-vis an imperfect market. That is, NIE coordinates relations among units within the market. These four categories serve only to organize the following discussions. Most individuals recommended more than one of the following roles for NIE, so no role should be thought of as strictly pre-empting the others.

Those who advocate a production or supply role for NIE have three commodities in mind: knowledge, technology, and instructional programs. Some (e.g., LITE) recommend that NIE restrict its role to the production and supply of knowledge. Such a position proceeds from an assumption about the proper Federal role in education, namely that the national government should not/does not have the right to control education through the production of educational materials which embody particular values and assert the primacy of certain goals. Others recommend knowledge production and supply, not to indicate exclusion of other activities, but to suggest research priorities. For example, we have Paul Hurd (Stanford University) recommending "The support of complex studies on the 'ecology' of the classroom and its impact on learning". (Conference Recommendations); David Hawkins suggesting that the first aim of curriculum research is, "...to remap the elementary domains of subject matter in such a way as to make these maximally accessible" ; or Lawrence Fish advising NIE to, "...support greater reserach on the processes of development, dissemination, and implementation..."

Others argue the need for production and supply of technology as the most useful way to improve education. NIE ought to produce methods and models of curriculum development, needs assessment, evaluation, implementation, and staff development which others can adopt and use for their own purposes. Such a role, they argue, avoids the twin evils of endless research results accumulating but never improving practice, and of full-scale centralized curriculum development which suffers the defects we have reviewed above. Thus, James Squire argues, "...the need for encouraging development of alternative models for achieving the same purpose"; and M. L. Brockette, state commissioner of education in Texas, urges in a letter to the Task Force that NIE, "...direct a major part of its attention and resources to the development of improved instructional techniques."

Production and supply of the third commodity--instructional programs--needs little elaboration. Jerrold Zacharias, Howard Mehlinger, Richard Schutz, Ron Brandt, and others argue for development of instructional materials as a proven, effective means for improving education. We have also quoted James Squire, a publisher, as favoring development; he makes a further argument for curriculum development by noting that although, "...a greater pay-off results from the improvement of teachers than of products..the difficulty of reaching large numbers of teachers (makes) product development...more realistic."

In general, those who argue for production as a critical NIE role also argue that NIE should supply what it produces. Instructional programs are the exception; some propose that these should be turned over to publishers to supply because of their superior marketing, distribution, and storage capabilities. NIE might also play a significant role in synthesizing and disseminating research results in areas of interest to practitioners (e.g., effects of class size on learning).

Supply alone is also an option. This argument operates from the premise that instructional programs already abound which practitioners know little about. Samuel Postlethwait, for instance, claims that, "Products already produced are lying on shelves awaiting publicity or funds". Consequently, NIE should provide information about what already exists in forms convenient to practitioners.

Likewise, NIE should develop delivery systems for new technologies to ensure that they are properly understood and widely used. As Table I indicated, provision of training and technical assistance is a popular recommendation (a number of people for instance suggested that we establish in education the analog of agricultural extension agents. Lawrence Senesh recommends the establishment of 20-25 regional centers to work on creating closer relationships between schools and their communities). Many today perceive supply activities --both in conjunction with production and by themselves--as a critical underdeveloped aspect of a national R & D system.

While production and supply are functions and can also be purposes for the Institute, the next two modes of involvement rely on the functions of production and supply to serve other purposes. That is, NIE can produce and supply knowledge, technology, and products as ends in themselves or as means for stimulating and articulating demand, or for coordinating the work of others. We next examine each of these purposes in turn, purposes which suggest quite a different role for the agency than production/supply as an end-in-itself.

The stimulation and articulation of demand appear to many to be a more appropriate role for NIE than the direct production of materials for use in schools. This approach to the Federal role acknowledges that control of education belongs with states and localities, but argues that the Federal Government can legitimately offer assistance in educational planning and decision-making. Rather than implicitly establishing purposes for the schools through provision of particular programs, the government can and should help the schools determine their own purposes. This perspective on the Federal role leads to recommendations such as the following:

- conduct and/or build capacity in others to conduct needs assessments.

- disseminate information and opinions--contending briefs--on future social, economic, political, and other trends likely to affect the shape of and demands on education in the future.
- conduct and/or build capacity in others to conduct program evaluation, and supply evaluation results to consumers.

The last of these recommendations is particularly appealing to many, including a number of state legislatures (e.g., Florida and California) which have passed legislation requiring "learner verification and review" of all instructional materials (Kenneth Komoski's term for the process of testing and revising materials on the basis of trial use with students.) Table II also indicates that many of our respondants favor NIE activities which aid consumer decision-making. Almost one half the respondants checked "build selectivity not demand" as a priority activity in the area of dissemination and implementation support. (Again we remind the reader that row totals sum to more than 100% due to multiple entries from each respondant, and that generalizations from this data are not valid due to non random sampling.) We interpret this preference to mean that respondants' favor the supply of information and/or support services which help them to select instructional programs and other products.

In practice, this perspective on the Federal role is similar to the one which identifies supply of technology as a top priority. Both stress the value of assisting others in planning and carrying out their own purposes, but there is an important distinction between them. Those who advocate supply of technology to states and localities envision such units as developing capacity to carry out the full range of R & D activities (e.g., research, development, evaluation, etc.). Such an

each cell shows:
(raw no.) row % / column %

Table II

RECOMMENDED ROLES FOR NIE IN SPONSORING DISSEMINATION AND IMPLEMENTATION OF NEW CURRICULA

(Responses to "Guides for Public Discussion"; Question #4: "Should NIE Help Implement New Curricula?")

Recommended Role for NIE in Curriculum Dissemination and Implementation

Type of Respondent		Number of Respondents Who Answered This Question	Nothing	Supply Information About New NIE-Sponsored Curricula	Encourage Others to Help Schools Use New NIE Curricula	Arrange for Publication of New NIE Curricula	Offer Training and Technical Assistance in Implementation	Promote NIE Curricula	Build Selectivity Rather Than Building Demand	Other
Layperson*		(99) 100%/7%	(71) 7%/9%	(31) 31%/9%	(28) 28%/6%	(16) 16%/7%	(42) 42%/8%	(17) 17%/8%	(48) 48%/8%	(13) 13%/14%
Students		(16) 100%/1%	(0) 0/0	(4) 25/1	(4) 25/1	(2) 13/1	(2) 13/-	(3) 19/1	(6) 38/1	(0) 0/0
Professional Educators	**Teachers/ Professors**	(506) 100%/38%	(36) 7/47	(133) 26/40	(160) 32/37	(96) 19/43	(213) 42/38	(85) 17/41	(205) 41/34	(35) 7/39
	Specialists	(98) 100%/7%	(5) 5/6	(23) 23/7	(31) 32/7	(20) 20/9	(43) 44/8	(20) 20/10	(49) 50/8	(1) 1/1
	Administrators	(442) 100%/33%	(22) 5/29	(97) 22/29	(148) 33/34	(63) 14/28	(167) 38/30	(53) 12/26	(196) 43/31	(22) 5/24
	Others	(166) 100%/12%	(8) 5/10	(45) 27/13	(61) 37/14	(25) 15/11	(65) 39/12	(22) 13/11	(106) 64/17	(19) 11/21
Unknown***		(14) 100%/1%	(0) 0/0	(4) 29/1	(7) 50/2	(3) 21/1	(7) 50/1	(4) 29/2	(5) 36/1	(0) 0/0
Non-Codeable**		(2) 100%/-	(0) 0/0	(0) 0/0	(0) 0/0	(0) 0/0	(1) 50/-	(1) 50/-	(2) 100/-	(0) 0/0
TOTALS		(1343) 100%/100	(77) 6/100	(334) 25/100	(438) 33/100	(225) 17/100	(555) 41/100	(205) 15/100	(611) 45/11	(90) 7/100

* Laypersons include parents and interested citizens who did not also indicate that they held professional positions in education.

** "Non-codeables" include those who checked so many categories that classification was impossible.

*** "Unknowns include those who failed to supply information about their positions.

approach guarantees a maximum of autonomy to each unit in the system. Those who advocate demand articulation, conceive planning, problem identification, goal setting, and assessment as local-state priorities. In the interests of efficiency, however, they regard a division of labor which assigns other activities to other entities (e.g., development of instructional programs to Regional Labs and publishers) as desirable.

A second purpose NIE might serve is to coordinate the work of other educational agencies. Such a purpose principally serves the value of efficiency, but also of harmony and cooperation. To prevent waste, duplication, and gaps in the provision of goods and services; to cut down on time lags which render action too little and too late; to point to contradictions and ambiguities in the plans which others prepare to carry out their purposes; to alert the educational system to plans and actions conceived at different levels and in different sectors which conflict with one another: these are some aims of coordination.

Most often, people have expressed the need for coordination in relation to the multifarious activities of Federal agencies (a recent Federal Interagency Committee on Education report indicates that more than 30 Federal agencies are involved in curriculum activities). Lawrence Senesh summarizes the frustrations of many when he recommends that, "Resource allocation of Federal agencies should be closely coordinated within one system and with commonly agreed-on-goals". Others, however, also argue for Federal-State-local partnerships in the service of coordination (e.g., Don Egge's [Oregon State Department of Education] conference recommendation to, "encourage cooperation of local, State, and national organizations in the formation of a National policy").

E. CONCLUSIONS: IMPLICATIONS FOR POLICY

Our inquiry indicates that there is no unanimously endorsed role for the National Institute of Education in the area of instructional program improvement. Any course of action the Institute takes will have its defenders and detractors, will serve the interests of some but not of others, and will realize, however imperfectly, some values but not others. We conclude our summary of findings with some observations suggested by our inquiry and with some thoughts about policy-making, as a prelude to the presentation of policy options in Section II.

Curriculum reform is an historical phenomenon, a response to social, political, economic, and intellectual forces and events. Calls for and attempts at curriculum reform have come in response to immigration, war, the Depression, judicial decisions, rapid industrialization and urbanization, and other such stimuli. Intangible influences such as the emergence of new ideas (e.g., the psychology of Stanley Hall or the philosophy of John Dewey) and new techniques (e.g., the Army Alpha Tests developed during World War I) have shaped reform efforts, too. An historical perspective, then, suggests that policy should include consideration of present and likely future social, political, economic and intellectual conditions. Such an appraisal is beyond what we can accomplish here, but we will draw attention to some of the most salient features of the current landscape.

Today, pervasive dissatisfaction with the way our institutions are operating leads many people to question the legitimacy of institutions and their spokesmen. At the same time, a second pervasive feeling--that the forces controlling people's lives are remote, impersonal, and beyond their power to reciprocally influence—is causing widespread frustration. While such feelings and perceptions lead some to apathetic resignation, others are demanding greater accountability on the part of those who claim to represent them, and more direct involvement in the decision-making processes that affect them.

We anticipate that such demands will influence the work of educational decision-makers at all levels—from the classroom teacher in Albuquerque, New Mexico, to the Federal bureaucrat in Washington.

At the same time, a variety of special interests will continue to press their agendas for reform. We have a longstanding tradition of viewing education as a panacea for a multitude of social ills and a more recent tendency to regard curriculum development as an immediate means to influence education. Moreover, as William Boyd pointed out in his paper, social reform has become the occupation for a new echelon of managers who have a vested interest in reform, and in raising or creating issues which require government action. Consequently, we anticipate that escalation in demands for educational solutions to social problems will lead to further calls for curriculum development, and that NIE undoubtedly will be one focal point for such pressure.

Three values people commonly require from government are representativeness, technical competence, and leadership; each acts as the basis for a claim to legitimacy. The various positions we have reviewed with respect to the Federal role in curriculum development generally emphasize one or two of these values. For example, those who want NIE to actively sponsor innovation favor leadership. Technical competence is the value emphasized in the argument favoring Federal support for special institutions to conduct curriculum development. And advocates of a restricted Federal role generally claim that State and local governments more adequately represent the will of the people. In principle, these values do not conflict with one another; in practice, they almost always do, so that at the heart of disputes over the proper Federal role are value conflicts.

One method for resolving the clash among these values has been to distinguish decisions which are political from those which are technical and professional. By this method, a government agency lays claim to at least two bases for legitimacy. This classic split usually takes the form of public involvement (i.e., a political process) on questions of ends or purposes and "expert" involvement (i.e., a technical/professional process) on questions of means.

For example, as we suggested above, value questions influence "technical" decisions about the allocation of resources: the selection of research, development, or dissemination as the strategy of choice depends on the goal. This suggests that the agency solicit public testimony to determine purposes, then rely on expert judgment in selecting the means to carry out those purposes. Such a procedure, however, suffers at least one defect when applied to educational affairs: "technical decisions" in education may not be comparable with technical decisions in other applied fields (e.g., medicine, engineering) which have well-developed technologies based on accumulated theoretical knowledge from the "hard sciences". To a much greater extent than in fields such as medicine or engineering, "method reflects, sustains, logically implies, the purpose--or subverts it", in education. Consequently, the foundation for technical decision-making is somewhat insecure, leading laypersons to vie with professionals for control over decision-making, each claiming a basis for legitimacy. To examine the professional claim to legitimacy more closely, we turn next to the realm of factual claims about curriculum development.

In cases where "experts" independently verify one another's judgments, their claim to expertise (and hence their legitimacy) is strengthened. Where this is not the case, the claim is weakened, and laypersons quite naturally will question the right of experts to judge matters for them. With respect to curriculum development, our evidence indicates little consensus about "the facts".

On the most fundamental empirical issue--the effectiveness of curriculum development as a means to improve education--little consensus exists among professional people. Some cite evidence that past curriculum reform efforts have led to significant changes, others cite counter-evidence to indicate that little change has occurred, and most evidence is subject to challenge on some grounds.

More importantly, however, the debate has centered on what facts count, and on what they count for. That is, people select certain facts and claim significance for them on the basis of some interpretive framework or system of belief. These beliefs rest on values, so the debate over "the facts" is grounded once again on conflicts of value. A single example will make this point.

On balance, some claim, Federal involvement in curriculum development has influenced significantly the curriculum of American schools. If curriculum development is a potent weapon in the Nation's arsenal for attacking national problems, this argument runs, then greater investment in curriculum development is a wise policy. At the same time, those who believe that Federal initiatives in this area represent a danger to State and local control and threaten the right of others to determine their own goals, argue that the "fact" of the efficacy of Federally-sponsored curriculum reform leads one to curtailment of Federal initiatives as the best policy.

On the other hand, if we accept the "fact" that Federal attempts at curriculum reform by and large have failed to affect the curriculum of American schools, the significance of this "fact" is no less equivocal. "We were never given a proper chance", the advocates of development might claim. "We know now that more resources are necessary; give them to us, we will redouble our efforts, and, eventually, we will produce results". In this case, the opponents of development simply can point to the meager results of past investment as the reason for declining to invest further.

In either instance, the selection of "facts" to accept depends upon one's values, perceptions of self-interest, and the shifting constellation of beliefs into which each person assimilates facts. As we have seen, disputes over values are profound, and competition for scarce resources creates conflicts, not commonalities, of interest. In such an environment, facts may provide some leverage in the debate, but will rarely settle issues conclusively.

A policy might be regarded as a prediction based on beliefs about the state of affairs in some area--beliefs about how things got that way and about how to improve them. Generally, people hold these beliefs in the face of uncertainty, so that the "prediction" may be no more than a sophisticated guess at the outcomes of implementing the policy. These beliefs are in turn based on matters of fact and matters of value, each influencing and informing the other in subtle ways.

As we have seen, there is no obvious way to integrate everyone's beliefs into a single policy, and no way to differentiate "true" from "false" beliefs--because we are uncertain about so many things and because beliefs involve not only what is "true" or "false" but also what people value. Consequently, in Section II we present to NCER a set of policy options which reflects and embodies the range of values and assumptions elicited by our inquiry. The NCER, then, in formulating a policy, will be able to express its beliefs with some awareness of the alternatives.

II. NIE CURRICULUM DEVELOPMENT POLICY OPTIONS

A. INTRODUCTION

Purposes Of This Section

The preceding section (Section I) summarized the most policy-relevant findings of the Task Force's various activities. This section (Section II) presents and explains four major NIE curriculum development policy options for Council consideration. In the final section of this report (Section III), the Director and his staff recommend adoption of one of these options.

The central purposes of an NIE curriculum development policy are (1) to indicate to all interested persons the Institute's general responsibilities and intents in this area, the types of activities that are eligible and ineligible for Institute support, the conditions under which particular types of activities will be eligible and ineligible, and the types of criteria to be used in deciding what to support; and (2) to provide general guidance for discretionary action by the Director and his staff in funding and managing projects in this area. Accordingly, each policy option presented in this section contains statements of general policy position, categories of eligible and ineligible activities, and listings of criteria to be applied in selecting and funding proposed activities.

Although the four policy options offered here encompass the range of views and recommendations advanced to the Task Force, the requirement to construct a limited number of discrete options necessarily involves oversimplification. In reality, an unlimited number of policy variations is possible. However, we agree that the most productive approach is to provide the Council with a manageable set of major options and to recognize that the Council, upon selecting a general position it considers most sensible, most likely will refine what is presented here by combining elements of different options and by adding or deleting statements, activities, and criteria.

Definitions and Policy Limitations:

In its activities over the past year and a half, the Task Force has addressed topics in "curriculum development." One of the clearest lessons of these experiences is that definitions of "curriculum" vary widely, ranging from quite restricted conceptions (e.g., courses of study, teachers' guides, textbooks, and other students' materials) to quite broad conceptions (e.g., all students' experiences, in and out of school, intended and unintended).

We recognize that the broader definitions of "curriculum" have become increasingly popular over the past few decades, that many factors, intended and unintended, affect children's educational experiences and learnings, and, therefore, that almost all NIE-sponsored activities--whether or not they officially are deemed "curriculum" activities--will somehow affect children's curricula, broadly conceived. However, the purpose of these policies is not to provide guidelines for all of NIE's activities. Instead, they are meant to cover only a part of the Institute's work--that which pertains to research on and the development, evaluation, dissemination, and implementation of instructional programs. As explained in the Preface to this report, we refer to all such activities as parts of "instructional program improvement". (The reader is encouraged to review our definitions on pages 3 and 4 in the Preface).

We have limited the policy options presented here to activities in "instructional program improvement" for two basic reasons. First, policies pertaining to any and all aspects of "curriculum", broadly conceived, could touch upon almost all of the Institute's actual and potential activities. Such policies would be inappropriate in light of the Task Force's limited charge. Second, some aspects of the broader conceptions of "curriculum" (e.g., students' experiences, unintended as well as intended) are not proper--or even feasible--subjects of Federal policy. That is, while NIE as a Federal agency must decide what types of activities it intends to support (or not support) with its appropriated funds in attempting to fulfill its legislated mandate, it should not--and indeed cannot--decide what types of programs will be selected for use in American classrooms, what types of teaching/learning activities will take place in those classrooms, or what types of learning will occur. All instructional programs developed with NIE funds will be designed with certain types of instructional activities and learning outcomes in mind, of course. But all of the other influential determinants of instruction and learning render attempts to set Federal policies about actual instruction and learning meaningless.

In short, we have not ignored those who advocate the broadest conceptions of "curriculum". Indeed, we realize that all instructional plans and materials may lead to a wide variety of educational activities, which in turn may yield a wide variety of learning outcomes. But here we will concentrate on what we consider the only proper (and feasible) domain for NIE: instructional program improvement activities that support and improve the work of state, local, and private agencies.

Major Categories Of Activities Varied In The Policy Options:

The four policy options presented in this section vary in two main ways: (1) in the type of activities they allow and disallow and (2) in the basic Institute stance or attitude toward activities that are allowed. Here we will explain and illustrate the four major categories of activity that are varied in the policy options: research; efforts to strengthen, facilitate or coordinate others' work; prototypic development; and full-scale development. We provide these fuller explanations here as a preface to the policy options. In the options themselves we will use only brief references (e.g., "prototypic development") in the interests of facilitating the Council's work by keeping the policy statements as brief and unrepetitious as possible. In finalizing the policy statement it chooses to adopt, the Council may wish to consider inclusion of such descriptions.

1) Research: Activities eligible for support in this first area include various types of investigations addressed to the characteristics of curriculum, instruction, and learning. Such investigations might include, for example: studies of how children (or adults) learn various subject matters; studies of the effects

(intended and unintended) of different instructional programs, conditions, materials, techniques, activities, and experiences; studies of the subject matter being taught, the activities being carried out, and the materials being used presently in American classrooms and other educational settings; studies of the characteristics and requirements of classroom teachers; analyses of the structure of knowledge and the implications of that structure for instruction; and other studies that may make possible improvement in curriculum, instruction and learning.

2) Efforts to Strengthen, Facilitate, or Coordinate Others' Work: In sponsoring activities in this second category, NIE would not support the actual development of instructional programs. Instead, it would (1) strengthen the capabilities of state, local, and private agencies to conduct their own development and (2) facilitate or coordinate the work of other agencies through activities such as the following:

(a) creating and testing improved procedures for needs assessment, development, evaluation, dissemination, implementation, or other steps in the improvement of instructional programs

(b) gathering, analyzing, and disseminating information of use to those engaged in the improvement of instructional programs at the state and local levels and in the private sector; for example:

- monitoring, studying, and reporting on available instructional programs and materials and current efforts to improve them; suggesting improvements in those products and activities not evident in current efforts

- organizing and sponsoring conferences and other appropriate means of synthesizing and assessing current knowledge and technology in specific areas of curriculum and instruction, drawing implications for educational programs and practice, and disseminating the results to practitioners and developers

- helping to identify available exemplary programs and disseminating information about them

(c) facilitating the activities of local, state, and private groups through:

- assisting in the identification of problems and needs which may result, in part at least, from weaknesses in available instructional programs
- producing guidelines and materials for use in training others to perform particular tasks in the development of instructional programs
- assisting in the design and provision of organizational arrangements, approaches, and settings which support and facilitate the involvement of various interested participants in instructional program development
- designing improved procedures and arrangements for collaborating on instructional program development; fostering and coordinating such collaboration
- assisting in the design and provision of improved procedures for adapting available programs for use in local settings
- providing reliable information about available products, guidelines for decision-making, or other relevant support services to help teachers, administrators, parents, and others select instructional programs consonant with their own needs and goals

(d) stimulating needed development by others through the conduct of market research, needs assessments, recognition of high-quality achievements, and various other incentives

3) Prototypic Development: As indicated in the definitions above, Institute sponsorship of "prototypic development" would include the design and production of exemplary parts of instructional programs intended to serve as models for continued development by others. For example, NIE might decide to support the creation of a prototypic

one-month instructional unit which would demonstrate to other potential developers the form, content, and efficacy of the elements of an eventual one-year course. Institute-sponsored prototypic development will always include appropriate evaluations of the prototypes to determine their qualities and effects on users. Information disseminated about prototypes developed under Institute sponsorship always will include the results of such evaluations. The prototypes themselves will be disseminated to serve as models for continued development by others only when the evaluations indicate acceptable quality and effects.

4) Full-Scale Development: Activities sponsored under this category would include the complete design and production of instructional programs ready for use in classrooms or other educational settings. As explained in Policy Options #3 and #4 below, when the Institute decides to give support for such activities, it will give funds in phases (conceptualization and design; prototypic development; full scale development; and final revision), with continued support for subsequent phases dependent upon the results of Institute analyses at the end of each phase. Institute-sponsored full-scale development will always be accompanied by formative evaluations, summative evaluations (in cases where full-scale development is completed), dissemination of program information and evaluation results, and—when the results of summative evaluations are satisfactory and when certain other requirments are met--support for the dissemination and implementation of the programs themselves.

Contents and Format Of The Policy Options:

In the remainder of this section we present several optional policy statements and, for the Council's consideration, discussions of those statements. These include:

1) a set of optional "preamble" statements which communicate important Institute beliefs, reasons for the Institute's general policy position, or other salient points warranting recognition;

2) four optional policy positions, each of which includes:

    (a) a general position statement,

    (b) an indication of the types of activities that are eligible and ineligible for Institute support, and

    (c) a list of criteria to guide project selection and funding decisions; and

3) a brief discussion of each policy option, including a summary of the main arguments for and against each option and an indication of some of the likely consequences of adopting each option.

Summary Of The Four Policy Options And How They Vary:

As we have mentioned already, the four policy options vary in two main ways: (1) in the types of activities they allow and disallow and (2) in the basic Institute stance or attitude toward activities that are allowed. Options #1, #2, and #3 differ mainly in the extent of allowable activities. #1 is most restrictive, allowing only research activities and that development which is required for the successful conduct of Institute-sponsored research. #2 allows research efforts to strengthen, facilitate, or coordinate others' efforts, and prototypic development, but prohibits full-scale development.

#3 allows all four types of activity, including full-scale development. The funding criteria are similar in #1, #2, and #3, indicating both conditions necessary for Institute support and factors to be considered in choosing among proposed projects meeting the necessary conditions.

Option #4 differs from the other three in the general stance and attitude it embodies. It allows all four types of activities (as does #3), but it embraces the notion that the Institute is responsible for supporting activities in all four areas and should pursue all types of activity vigorously. The criteria listed under Option #4, therefore, serve as means for discriminating among competing proposals, not as necessary conditions for Institute support.

B. POLICY PREAMBLE

If the Council decides to incorporate a "preamble" of some sort in the policy it adopts, it may wish to consider inclusion of statements such as the following. Each statement is independent of the others; inclusion of one does not require inclusion of the others.

1.) The direction of the nation's educational system is primarily the responsibility of state and local governments. In light of this principle, NIE's curriculum activities shall in no way preempt state and local authority to determine the schools' curriculum. Moreover, NIE will in its activities attempt to enhance cooperation among state, local, private, and federal agencies.

2.) NIE recognizes and values the pluralistic nature of American society and shall attempt to preserve and enhance such pluralism by ensuring variety in the instructional programs it sponsors, in the types of instructional program improvement activities it supports, and in the types of people and groups it funds.

3.) NIE's legislative mandate requires that its resources be concentrated on research and development activities in five priority areas. As a result of this mandate, the Institute supports and will continue to support various types of research which inevitably pertain to what is taught, the instructional materials that are used, and the instructional techniques employed in American classrooms. Moreover, individuals and agencies not funded by the Institute often utilize the results of Institute-sponsored research in developing, improving, evaluating, disseminating, or implementing instructional programs. Thus, although the Institute's research activities may not be officially designated "curriculum research" and may not be designed explicitly to affect curriculum practice, almost all of the Institute's activities do relate to curriculum matters and, to this extent at least, NIE necessarily has a "curriculum role". The purpose of this policy is to guide the selection and conduct of other Institute curriculum activities, specifically those pertaining to improvements in instructional programs.

4.) NIE recognizes that conceptions of "the curriculum" vary widely. Alternative definitions include courses of study, syllabi, the knowledge to be learned, teachers' materials, students' materials, teaching activities, learning activities, intended student experiences, all student experiences, students' cognitive achievements, and all changes in student behavior. For a variety of reasons (including manageability and considerations of which phenomena can and should be attended to by Federal agencies), the following policies are restricted to possible NIE activities with respect to improving instructional programs. Such activities include needs analysis, development, evaluation, dissemination, and implementation conducted explicitly with respect to plans, guides, textbooks, tests, and other products available for use in teaching/learning activities. Of course, all such products may influence other aspects of "the curriculum"--such as teachers' actions, students' experiences, students' learnings, and so forth--and, indeed, all such products are designed to affect these other aspects in particular ways. But these policies are not intended to govern an NIE role in determining what will happen in American classrooms or in other educational settings. Instead, they are intended to guide possible Institute activities in improving materials that might be chosen for use in such settings.

C. FOUR OPTIONAL POLICY POSITIONS

Policy Option #1

NIE's activities pertaining to the improvement of instructional programs and materials may include: the sponsorship of research on issues of curriculum, instruction, and learning; the synthesis of research findings in this area (including the findings of research sponsored by other sources, as well as that supported by NIE); and the dissemination of research results and syntheses. Under no circumstances will NIE support either the full-scale or prototypic development of instructional programs for use in educational settings, or projects intended primarily to strengthen, facilitate, or coordinate others' efforts to improve instructional programs. The only development permissable under NIE support will be that which is required for the successful conduct of Institute-sponsored research.

Criteria for Support: Although research, research synthesis, and research dissemination activities of the types described above are eligible for NIE support, support for none of them is guaranteed. In all cases, support will be given only when the Director has determined that the proposed activity:

- addresses a demonstrated, significant educational problem or opportunity for improvement
- does not duplicate similar work of high quality being performed elsewhere
- is relevant to NIE's legislated mission, goals, responsibilities, and priorities.

- is not likely to be performed by other individuals or agencies without NIE support
- is the most appropriate, promising approach to the demonstrated problem or opportunity, given the current state of knowledge and technology in the area of proposed work
- is based upon strong hypotheses and is likely to advance knowledge and/or technology in the area of work.

Furthermore, in choosing among eligible proposals and in making funding decisions, the Director will take into account the following considerations:

- likelihood of achieving the activity's stated objectives, as indicated by quality of plans, capabilities of staff, and availability of needed resources
- cost-effectiveness of the activity's chosen approach to achieving its objectives
- utilization of relevant parties' resources and capabilities
- extent and nature of population potentially benefiting from the proposed activity.

Discussion Of Policy Option #1

Arguments Given for this Position: In the course of its activities, the Task Force has heard a number of arguments for an Institute role restricted to the conduct, synthesis, and dissemination of research on issues of curriculum, instruction, and learning. Following are summaries of some of these arguments. Please remember that these are not necessarily the staff's views; they are arguments given by those who might support Option #1:

1) NIE, as a Federal agency, should sponsor only needed activities that cannot be accomplished without Federal support. Thus, in the area of instructional program improvement, NIE should concentrate on the support of research, leaving development to willing and able agencies in the private, state, and local sectors.

2) All attempts by Federal agencies to improve instructional programs--whether directly by supporting production or indirectly by facilitating others' attempts at production--inevitably undermine local and state decision-making authority and interfere with the free enterprise system of producing and distributing instructional materials. The only way to avoid this undesirable, unconstitutional infringement is for NIE to refrain from instructional program development activities altogether.

3) Centralized, highly-specialized, large-scale, expensive curriculum development projects supported by Federal agencies favor a professional elite, force the top-down imposition of programs conceived and developed without the meaningful involvement of users, and consequently, usually result in failures in adoption and in educational progress.

4) Past Federally-supported efforts to develop and implement instructional programs have promoted increased uniformity rather than diversity in educational practice.

5) Support of instructional program development is not necessary to fulfill NIE's legislated mission and is not the most promising approach to accomplishing that mission.

6) With a limited budget, NIE will not be able to contribute much to the Nation's needed development. However, it can contribute research to improve the development efforts of others, and no other agency is likely to support this needed research.

7) Adequate incentives (e.g., profit, need) exist for state, local, and private agencies to sponsor the development, evaluation, and dissemination of needed instructional programs. NIE should not duplicate their capabilities and efforts. Competition from Federally-sponsored projects leads to inefficiency, not stimulation and improvement.

8) Instructional programs are less influential determinants of what students learn than are other elements of educational settings and practice (e.g., learning environments, teacher-student interactions). Hence, NIE's efforts to improve learning should concentrate on other, more potent factors.

9) Federal agencies such as NIE are too distant from local schools to be able to respond to local problems, needs, and desires through development.

10) Because Federal agencies, including NIE, tend to support a small professional elite to conduct their development efforts, the values reflected in the resulting products are not in the mainstream of American culture.

11) Support and stimulation of instructional program development by Federal agencies, including NIE, creates much unnecessary change but little improvement in schools.

Not all of those who share these views advocate the limited role for NIE indicated in Option #1. Thus, for example, some have argued that state, local, and private agencies are willing and able to do much of the needed development but need competition, procedural advances, and other types of support from Federal agencies to stimulate high-quality performance. Others agree with many of the criticisms of Federally-supported development efforts outlined above, but contend that these weaknesses indicate needed improvements and are not reasons for abandoning Federal efforts altogether. Other arguments against Option #1 are provided in the discussions of other policy options.

Some Possible Consequences Of Policy Option #1: If Option #1 were adopted as NIE policy, NIE inevitably would become more research-oriented. Support of development and of efforts to strengthen others' development capabilities would cease. More support likely would be given to basic researchers--people in universities, colleges, private research organizations, and R & D Centers. Less support likely would be given to state departments of education (SEAs), local schools and districts (LEAs), development-oriented private organizations, and Regional Laboratories. Researchers and scholars in academic disciplines might receive more support; those in schools of education might receive less. NIE might fund a larger number of projects at a given budget level under this option than under the others, as research generally is less costly than development.

An example of a proposal that might receive funding under this option would be one from a team of eminent researchers to study the acquisition and development of reading skills, comparing the effects of alternative approaches to reading instruction (if the proposal scored high on all of the listed criteria and outscored other proposals competing for funds). Examples of projects that would not receive Institute support under Option #1 include: (a) a proposal to design and create procedures and prototypes which LEAs and SEAs might use in developing metric educational programs; (b) a proposal to develop a reading program for a small population of Indians; and (c) a proposal to develop a citizenship education program.

Few individuals or groups are likely to oppose this option's provision for the support of research related to instructional program improvement. With the exception of those who argued for the abolition of NIE and the discontinuation of all Federal "interference" in education, almost all of those who expressed their views to the Task Force claimed that good research is needed and that NIE should assist with funding. However, many observers may be dissatisfied with the impossibility of strengthening others' capabilities or facilitating others' work, arguing that research alone will not be a sufficient force in improving others' development efforts, that most developers tend to ignore research results and, therefore, that more direct support is required if meaningful improvements in the Nation's development are to be realized. Some observers will be disappointed with the prohibition of full-scale development, particularly those who have argued that solid, substantial, and necessarily expensive efforts to integrate research and development are essential to meaningful instructional improvement. Arguments likely to be given by groups and individuals dissatisfied with Option #1 appear in the discussions of the other options.

Policy Option #2

NIE's contributions to the improvement of instructional programs may include sponsorship of (1) the conduct, synthesis, and dissemination of research on issues of curriculum, instruction, and learning, (2) efforts to strengthen, facilitate, or coordinate others' work in improving instructional programs, and (3) the prototypic development of new instructional programs. Under no circumstances will NIE support the full-scale development of complete instructional programs that are ready for use in educational settings.

The general principle guiding selection of Institute activities is to begin always with those activities least directly involved in the actual production of instructional programs and materials, advancing to consideration of more direct activities only after a determination that less direct activities will be inadequate. Thus, upon a request to NIE for assistance in addressing an important instructional problem or in taking advantage of an especially promising opportunity for instructional improvement, the Director will first determine whether the Institute can make an adequate contribution through the support of appropriate research, research synthesis, or research dissemination which will enable others to proceed with the remaining required work. In cases where the evidence indicates that Institute sponsorship of research activities alone will not suffice, the Director may consider the support of efforts to strengthen, facilitate, or coordinate others' work in improving instructional programs. Only when it is convincingly demonstrated that neither research nor efforts to facilitate others' work will suffice will the Director consider the support of prototypic development.

Criteria for Support: Although research, facilitation, and prototypic development activities of the types described above are eligible for NIE support, support for none of them is guaranteed. In all cases, support will be given only when the Director has determined that the proposed activity:

- addresses a demonstrated, significant educational problem or opportunity for improvement
- does not duplicate similar work of high quality being performed elsewhere
- is relevant to NIE's legislated mission, goals, responsibilities, and priorities
- will not be performed by other individuals or agencies without NIE support
- is the most appropriate, promising approach to the demonstrated problem or opportunity, given the current state of knowledge and technology in the area of proposed work
- is based upon strong hypotheses and is likely to advance knowledge and/or technology in the area of work

Furthermore, in determining which type of activity is required in a particular situation, in choosing among proposed projects, and in making funding decisions, the Director will take into account the following considerations:

- likelihood of achieving the activity's stated objectives, as indicated by quality of plans, capabilities of staff, and availability of needed resources
- cost-effectiveness of the activity's chosen approach to achieving its objectives
- utilization of relevant parties' resources and capabilities
- extent and nature of population potentially benefiting from the proposed activity

- extent to which the activity involves those having a stake in the outcomes
- likelihood that the activity will not reduce local/state control or unduly influence local/state decision-making authority

Finally, when all other factors are equal, NIE will give preference to research over facilitation and prototypic development and to facilitation over prototypic development.

Discussion Of Policy Option #2

Arguments Given for this Position*: Following are summaries of arguments given by groups and individuals who might support an Institute position which allows research, facilitation, coordination, and prototypic development but which prohibits full-scale development of any kind. Please remember that these are not necessarily the staff's views; they are the beliefs of some of those who have expressed their preferences to the Task Force.

1) Those who have a stake in the outcomes of education (particularly parents, students, and teachers) and who care to participate in the actual creation of new instructional programs should be actively involved in such development. The strength and breadth of support for this view is growing rapidly and continuously. At the same time, however, most advocates admit that effecting such involvement in a meaningful way is difficult. Consequently, there are calls for NIE support in finding, testing, and implementing new procedures for development which facilitate the involvement of all concerned parties.

2) Instructional materials may be important determinants of what is learned, but present methods of developing, evaluating, disseminating, and implementing such materials are primitive. Therefore, NIE should concentrate on procedural advances.

3) NIE can maximize the benefits of its investments by concentrating on research, procedural advances, and other activities which will strengthen the capabilities of others to do their own work. These types of investments cost much less than full-scale development, evaluation, dissemination, and implementation and will be used much more widely with much greater effects.

4) The process of instructional materials development is more important than the materials produced. Teachers and other users derive greater benefits from being involved in development activities than from receiving high-quality, ready-to-use materials completed by others. Such involvement produces understanding, commitment, and enthusiasm and, consequently, results in better implementation and more dramatic learner improvements.

5) The development work of the past two decades has resulted in more than enough programs and materials for use in schools. The greatest need for improvement now lies in designing ways to help teachers select from among these available products and adapt them for appropriate use in their own classrooms.

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*Some of the arguments already listed in the discussion of Option #1 are repeated here (sometimes in abbreviated or modified form), when such arguments are especially relevant to Option #2 as well.

6) There are adequate incentives for state, local, and private agencies to sponsor the full-scale development, evaluation, dissemination, and implementation of needed instructional programs. NIE should not duplicate their work.

7) Many qualified individuals and groups in settings across the country conduct development, but their efforts are uncoordinated. There are too many redundancies and gaps. NIE should assist by promoting coordination, communication, and cooperation among the various educational agencies and constituencies. It should keep informed of all development activities, analyzing and comparing those activities, and communicating its findings in a useful form to all interested groups so that they may work together in more productive ways.

8) NIE should refrain from sponsorship of full-scale development because, as the experience of the past two decades has demonstrated, centralized, highly-specialized, large-scale, expensive development projects supported by Federal agencies favor a professional elite, lead to the top-down imposition of programs conceived and developed without the meaningful involvement of users, and, consequently, result in programs that are not widely used or that fail in adoption.

9) NIE should refrain from sponsoring full-scale, centralized development by a professional elite to avoid two dangers: either (a) the elite might develop an inferior program which is adopted as a result of the developers' visibility and prestige or (b) the elite might develop a superior program which is not adopted because it lacks local relevance.

10) NIE should refrain from sponsorship of full-scale development because, as past experience has demonstrated, Federally-sponsored efforts promote greater uniformity in educational practice as a result of the various incentives and pressures to adopt Federally-sponsored products.

11) Support of full-scale instructional program development is not necessary to fulfill NIE's legislated mission and is not the most promising approach to accomplishing that mission.

12) Sponsorship of prototypic development offers many advantages for NIE. Because the costs of prototypic development are substantially lower than the investments required for full-scale development, a greater variety of new programs can be initiated and carried to the point where others can assess their promise and, when warranted, assume responsibility for continued development. Moreover, many of the most capable researchers, scholars, and other experts are willing to participate in prototypic efforts but are reluctant or unable to devote the much greater time required for full-scale development.

13) Consistent with (a) the principle of state and local control

of education and (b) our tradition of free enterprise, NIE, as a Federal agency, must be the party of last resort in the area of instructional program development. Therefore, NIE's policies must be restrictive with respect to activities in this area, allowing support for only those needed activities that cannot be accomplished without assistance from NIE.

Some Possible Consequences of Policy Option #2: If this option were adopted, the considerable Institute resources now devoted to development projects would be shifted to research, research synthesis, and research dissemination, to activities which serve to strengthen others' development capabilities and efforts, and to development of prototypic instructional materials. It is likely that attention would be given to some relatively new Institute activities, such as purely procedural advances. As under Option #1, basic researchers (in universities, colleges, private research organizations, and R & D Centers) probably would receive more support; groups that are primarily development-oriented probably would receive less support. In contrast to Option #1, some support would be given to agencies in a position to conduct various types of capacity-strengthening, facilitation, and coordination activities: SEAs, intermediate service agencies (e.g., BOCES, county offices, intermediate school districts), Regional Laboratories, and possibly some LEAs. At a given budget level, the Institute probably would fund more projects under this policy option than under Options #3 and #4, fewer projects than under #1.

Examples of projects that might receive funding under this option include: (a) the proposal to study the acquisition and development of reading skills described in the discussion of Option #1, (b) a proposal to design new procedures for determining instructional problems and needs at the local level, (c) a proposal to create prototypic instructional units and procedures for state or local agencies to use in developing their own metric education programs, and (d) a proposal to study and improve the potential of teachers' centers as organizational arrangements for local instructional materials development. Examples of projects that would not receive Institute support under Option #2 include: (a) a proposal to develop prototypic materials for aesthetic education, when it was determined that other agencies were able and willing to conduct such development with procedural guidelines and research resulting from NIE-sponsored efforts, (b) the proposal to develop fully a reading program for a small population of Indians that was also ineligible under Option #1, and (c) a proposal to fully develop a high school career education program.

Most of the groups and individuals who expressed their views to the Task Force are likely to support the eligibility of research, facilitation, and prototypic development under this policy option. The discussion guide responses, the public meetings, the meetings with various lay and professional organizations, the conference, and many of the letters and papers submitted to the Task Force evidence the popularity of possible NIE activities in capacity-strengthening, facilitation, coordination, and the development of "exemplary modules" (i.e., prototypic development). All in all, we judge that more people would be satisfied with Option #2 than with #1 because it supplements research with other supports that are considered important by many.

Some observers will be disappointed with the absolute prohibition of full-scale development, for reasons given already in the discussion of Option #1. Others will oppose the inclusion of facilitation and prototypic development activities, particularly those groups prefering no Federal involvement or a strict limitation to only needed research which cannot be performed by others. Of course, many of these persons' assessments would depend, at least in part, upon the degree (or perceived degree) of Federal influence exerted through facilitation, coordination, and prototypic development activities. If state and local educators have the option--free from other Federal incentive to accept or reject the results, such activities would be more acceptable to some. However, any appearance of Federal pressure--however covert--or any appearance of bias toward particular values or approaches would erode support.

Policy Option #3

NIE's primary role in contributing to the improvement of instructional programs is one of sponsoring (1) the conduct, synthesis, and dissemination of research on issues of curriculum, instruction, and learning, (2) efforts to strengthen, facilitate, or coordinate others' work in improving instructional programs, and (3) the prototypic development of new instructional programs. Research activities are most central to the Institute's mission and consequently, always are given preference over alternative activities. Similarly, efforts to strengthen others' capabilities and to facilitate their work are more consistent with the Institute's responsibilities than is prototypic development and, therefore, are given second preference.

Additionally, NIE may consider the sponsorship of the full-scale development of new instructional programs under certain limited conditions (specified below). Such consideration will occur only when it has been demonstrated convincingly that none of the higher priority activities will suffice as an Institute contribution in alleviating an important instructional problem or in capitalizing on an especially promising opportunity for instructional improvement.

In sum, the general principle guiding the selection of Institute activities is to begin always with those activities least directly involved in the actual production of instructional programs, advancing to consideration of more direct activities only when the inadequacy of less direct activities has been demonstrated convincingly.

Criteria for Support: Although research, facilitation, prototypic development, and full-scale development are eligible for NIE support, support for none of them is guaranteed. In all cases, support will be given only when the Director has determined that the proposed activity:

- addresses a demonstrated, significant educational problem or opportunity for improvement
- does not duplicate similar work of high quality being performed elsewhere
- is relevant to NIE's legislated mission, goals, responsibilities, and priorities
- will not be performed by other individuals or agencies without NIE support
- is the most appropriate, promising approach to the demonstrated problem or opportunity, given the current state of knowledge and technology in the area of proposed work
- is based upon strong hypotheses and is likely to advance knowledge and/or technology in the area of work

Furthermore, in determining which type of activity is required in a particular situation, in choosing among proposed projects, and in making funding decisions, the Director will take into account the following considerations:

- likelihood of achieving the activity's stated objectives, as indicated by quality of plans, capabilities of staff, and availability of needed resources
- cost-effectiveness of the activity's chosen approach to achieving its objectives
- utilization of relevant parties' resources and capabilities
- extent and nature of population potentially benefiting from the proposed activity

- extent to which the activity involves those having a stake in the outcomes

- likelihood that the activity will not reduce local/state control or unduly influence local/state decision-making authority

Conditions Necessary for Full-Scale Development: When research, efforts to facilitate others' work, and prototypic development prove insufficient, NIE may consider support of full-scale development. Full-scale development will be considered only when:

(1) all of the necessary conditions listed above obtain (e.g., the proposed development addresses a demonstrated, significant educational problem or opportunity for improvement, etc.);

(2) at least one of the following additional conditions obtains:

  (a) the proposed development constitutes the most effective means of equalizing educational opportunity, or

  (b) the proposed development constitutes the most effective way to meet a pressing national need (determinations of such needs will be based in part on the views of representative national samples of American citizens and will allow input from all concerned citizens), or

  (c) the proposed development capitalizes on a critical opportunity to improve the quality of American education, made possible through the unique coincidence of major breakthroughs in knowledge and/or technology and the availability of persons particularly capable of conducting the proposed development; and

(3) completed and tested prototypes of the proposed full-scale program demonstrate high promise of realizing the program's goals.

Evaluation of Developed Products: At appropriate points in the various phases of development, NIE will support evaluations of all instructional programs and materials it has chosen to develop. These will include formative evaluations (to indicate needed revisions) at the conclusion of both prototypic development and full-scale development, and summative evaluations of all products' final versions (to provide potential users with evidence of the products' quality and effectiveness).

Dissemination of Product Information: NIE will in all cases arrange for the dissemination of information about (1) the availability of products developed under its sponsorship and (2) the results of evaluations of those products.

Dissemination and Implementation of Products: In certain circumstances, NIE will take steps to ensure that (1) instructional products it has sponsored are made available to intended users and (2) potential users receive needed support in learning to use adopted products. The Institute will support such dissemination and implementation activities only when:

(1) the summative evaluations indicate that the products are of high quality and are effective in realizing their stated objectives, and

(2) one of the following conditions obtains:

  (a) such activities are required to realize the goal of equal educational opportunity on which the development was based, or

  (b) such activities are required to meet the national need on which the development was based. (In determining the effectiveness and appropriateness of the developed products in meeting the identified national need, NIE shall obtain input from a representative sample of the American public.)

Discussion Of Policy Option #3

Arguments Given for this Position*: Following are summaries of arguments that have been expressed by groups and individuals who might support an Institute position which allows research, facilitation activities, and prototypic development; which makes it more difficult to sponsor those activities most directly involved in actual development; and which allows some types of full-scale development but only under certain conditions. Please remember that these arguments are not necessarily the staff's views; they are the beliefs of some of those who have communicated their preferences to the Task Force.

1) Almost every educational problem and opportunity involves a unique combination of circumstances. Variations in need, knowledge, experience, technology, and the willingness and capabilities of potential performers require wide latitude for response. Therefore, it would not be in NIE's or the field's best interests to prohibit broad categories of activity which may be most appropriate in addressing specific problems. NIE should have a flexible policy which allows it to draw on the most promising tools in any given circumstance. While it should be more difficult to sponsor some activities than others, no potentially beneficial activities should be automatically excluded.

2) NIE as a Federal agency is responsible for selecting the most efficient, cost-effective approaches to important educational problems. Therefore, its policies should allow the whole range of efficient activities from which to choose in responding to important problems. If instructional materials development is the most cost-effective approach in a given circumstance, it should be eligible for support.

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* Some of the arguments already listed in the discussions of Options #1 and #2 are repeated here (sometimes in abbreviated or modified form), when such arguments are especially relevant to Option #3 as well.

3) Instructional materials development is the most direct link between research and practice. Without it, practitioners would not be able to take full advantage of research findings. Therefore, NIE should be able to go beyond research, facilitation, and prototypic development to full-scale development based upon the results of research--when such development is both appropriate and necessary.

4) Instructional programs are among the most influential determinants of learning. Therefore, if NIE is to fulfill its commitment to improve the practice of education, it cannot preclude creation of such important elements from its repertoire of possible activities.

5) Past experience has demonstrated that Federal support of only research, facilitation, or prototypic development does not ensure improvements in educational practice. The promising results of many such activities often are not utilized by others in their own development work. Therefore, in some situations NIE must be able to translate the results of research into practice through the support of development.

6) State, local, and private agencies can respond to local and regional needs but are not in a position to identify or address national needs. NIE as a Federal agency is in such a position and, by virtue of its unique vantage point and resources, can address national problems that otherwise would go untended or that would not be responded to quickly enough.

7) Instructional materials development is essentially the creation of new products to sell in a competitive market. The products must attract sizable enough shares of the market to justify heavy initial costs. Therefore, NIE should not sponsor the development of instructional materials which compete with commercially-produced materials. But it should sponsor the development of "thin-market" programs (e.g., to equalize educational opportunity for small segments of the population), where initial costs so outweigh potential profits that commercial producers are unwilling to underwrite the needed work.

8) Attempts at meaningful change through research and development always involve some risk. While the costs of R & D are often substantial, one rarely can guarantee that the attempted improvements will be successful, regardless of the apparent strength of the theories and hypotheses upon which the development is based. Few state, local, or private agencies can take the risks that are sometimes required to explore promising new approaches. Therefore, NIE as a Federal agency must do so.

9) While full-scale development (under certain circumstances) should be eligible for NIE support, research, facilitation efforts, and prototypic development should receive more support and emphasis than full-scale development, for reasons listed under the discussions of Options #1 and #2. (For example: much basic research is needed, but few can sponsor it; we need new procedures for development which facilitate the involvement of those having a stake and interest in such participation; present methods of development, evaluation, and so forth are primitive; teachers must be helped to develop more of their own programs and/or to better adapt those produced in the past few years; there is a need for better coordination among the many qualified developers across the country; etc.).

10) Consistent with (a) the principle of state and local control of education and (b) our tradition of private enterprise, NIE, as a Federal agency, must be the party of last resort in the area of instructional program development. Therefore, while NIE's policies should not absolutely preclude activities in this area, they should make it difficult to support such activities, allowing sponsorship only when it has been demonstrated that needed activities cannot be accomplished without NIE assistance.

Some Possible Consequences of Policy Option #3: If this option were adopted, NIE probably would sponsor more research, research synthesis, and research dissemination on issues of curriculum, instruction, and learning than it does presently, but it would not sponsor as much as it might under Options #1 and #2 (where full-scale development is prohibited altogether). Some of the Institute's resources presently devoted to full-scale development likely would be shifted to activities which serve to strengthen, facilitate, or coordinate others' efforts and to development of prototypic instructional materials. However, less support would be given to these types of activities than under Option #2.

As under Options #1 and #2, basic researchers (in universities, colleges, private research organizations, and R & D Centers) probably would receive more support than they do presently. As under Option #2, some support probably would be given to agencies in a position to conduct various types of capacity-strengthening, facilitation, and coordination activities (SEAs, intermediate service agencies, Regional Laboratories, and possibly some LEAs). In contrast to Option #2, some support probably would be given to groups capable of developing instructional programs needed in equalizing educational opportunity, in addressing important national problems, or in capitalizing on major breakthroughs in knowledge or technology. At a given budget level, the Institute probably would fund more projects under this policy option than under Option #4, fewer than under Options #1 and #2, but the variety of activities sponsored would be greater than under #1 and #2.

Examples of projects that might receive funding under this option include: (a) all of the proposals that were eligible under Option #2 (study of how people learn to read; design of new procedures for local needs analysis; creation of procedures and prototypic materials for state/local development of metric education; study and improvement of teachers' centers as settings for local development), and (b) the proposal to develop a reading program for a small population of Indians that was ineligible under Options #1 and #2.

Examples of projects that would not receive Institute support under Option #3 include: (a) the proposal to develop prototypic materials for aesthetic education when it was determined that other agencies were able and willing to conduct such development; (b) the proposal to fully develop a high school career education program when the proposers could not convincingly demonstrate that the activity was required to equalize educational opportunity, to meet a significant national need, or to take advantage of a unique opportunity for improvement made possible by a major breakthrough in knowledge or technology; and (c) the proposal to fully develop a citizenship education program when none of the above-listed necessary conditions could be met.

As explained in the discussion of Option #2, most of the groups and individuals who expressed their views to the Task Force are likely to support the eligibility of research, facilitation, and prototypic development possible under this option. Moreover, most of those who voiced recommendations in the various meetings would seem to favor the support of full-scale development under the circumstances delineated in this option (equalization of educational opportunity, national need that others cannot meet, unique opportunities for improvement). In sum, we judge that more people would be satisfied with Option #3 than with Options #1 and #2 because it makes more potentially valuable activities eligible but it provides progressively more stringent criteria for support of more active, direct development projects.

Conservative groups may be upset with the possibility of supporting full-scale development under this option. Some may see the "opportunity clause" as a loophole to allow the Institute to do whatever it wants. On the other hand, many minority group members--who need special instructional programs and who feel neglected by private, State, and local sources--are likely to support this option, as are those who believe that NIE must provide active research and development leadership under specified conditions. Those who believe that NIE must provide such leadership in all areas under almost all conditions likely will be dissatisfied with this option, preferring Option #4 instead.

Policy Option #4

Strong, continuing support of the full range of activities required to improve instructional programs and materials available for use in schools and other educational settings is an appropriate, legitimate, and necessary role for NIE in pursuing its legislated mandate to improve the quality of American education. The support of research on issues of curriculum and instruction, efforts to strengthen others' capabilities and to facilitate others' work in developing instructional programs, and the development of prototypic materials is necessary but not sufficient. Additionally, the Institute must sponsor the full-scale development of instructional programs in a broad range of subject areas, providing many high quality options to educators and learners. Moreover, NIE will sponsor whatever dissemination and implementation supports are needed to ensure that high-quality, effective instructional products developed under its sponsorship are made available to all potential users, are adopted as widely as possible, and are used properly.

Criteria for Support: In determining which type of activity is most appropriate in a particular situation, in choosing among proposed projects, and in making funding decisions, the Director will take into account the following considerations:

. significance of the educational problem or opportunity for educational improvement addressed in the proposed activity

. clarity of the proposed activity's objectives

. strength of the hypotheses upon which the proposed activity is based

- likelihood that the activity will advance knowledge or technology in the area of work
- relevance of the proposed activity to NIE's legislated mission, goals, responsibilities, and priorities
- appropriateness and promise of the activity's approach to the demonstrated problem or opportunity, given the current state of knowledge and technology in the area of proposed work
- likelihood of achieving the activity's stated objectives, as indicated by quality of plans, capabilities of staff, and availability of needed resources
- cost-effectiveness of the activity's chosen approach to achieving its objectives
- utilization of relevant parties' resources and capabilities
- extent and nature of population potentially benefiting from the proposed activity
- extent to which the proposed product represents an innovative alternative to current programs and practice, one worthy of development and testing
- adequacy of plans for marketing, promoting, distributing, and implementing products of the proposed development

Sequencing of Support for Full-Scale Development: When the Director decides to support the full-scale development of instructional programs for use in schools, funds will be given for sequential phases of the development activity, with analyses made by the Institute at specified points in that sequence to determine whether support for subsequent phases is warranted. Generally, the sequence of development phases shall be as follows:

(1) completion of conceptualization and design of intended instructional program and materials

(2) development of prototypes of the intended program

(3) development of the complete intended program

(4) final revision of the program on the basis of formative evaluations.

At the end of each phase, NIE will review the completed work. If at any such checkpoint the project's accomplishments prove to be unacceptable and show inadequate potential for improvement without substantial additional support, NIE will terminate funding for the project. However, if it is determined that the project's accomplishments remain high in quality and promise, NIE support will continue.

Evaluation of Developed Products: At appropriate points in the various phases of development, NIE will sponsor evaluations of all instructional programs and materials it has chosen to develop. These will include formative evaluations (to indicate needed revisions) at the conclusion of both prototypic development and full-scale development, and summative evaluations of all products' final versions (to provide potential users with evidence of the products' quality and effectiveness).

Dissemination of Product Information: NIE will in all cases arrange for the dissemination of information about (1) the availability of products developed under its sponsorship and (2) the results of evaluations of those products.

Dissemination and Implementation of Products: In most cases, NIE-sponsored instructional programs will be made available to intended users. However, the Institute will not support such dissemination and implementation activities when the summative evaluations indicate that the products are of insufficient quality, are ineffective in realizing their stated objectives, or consistently lead to undesirable unintended effects.

Discussion Of Policy Option #4

Arguments Given for This Position: Following are summaries of arguments that have been expressed by groups and individuals who might support an Institute position calling for strong, active, continuous leadership in the full range of activities required to improve instructional programs: research, capability-strengthening, facilitation of others' efforts, coordination, prototypic development, full-scale development, dissemination, and support for implementation in a broad range of subject areas. Please remember that these arguments are not necessarily the staff's views; they are the beliefs of some of those who have communicated their preferences to the Task Force.

1. Improvement of instructional programs available for use in educational settings is a top priority. Such improvements are expensive and involve risky investments; not all efforts to effect meaningful change succeed. State, local, and private agencies do not have the resources needed to mount the required R&D programs or the incentives to actively explore promising innovations. Hence, unless a Federal agency such as NIE provides substantial support for full-scale development efforts, needed new programs will not become available.

2. State, local, and private agencies develop curricula, but their work is often of low quality and inadequate variety. Therefore, NIE should compete aggressively in the development of instructional programs, providing the competition needed to stimulate improvements in others' work, providing programs in new subject areas, and providing innovative alternatives in more traditional areas.

3. Instructional programs are among the most influential determinants of learning. Therefore, if NIE is to fulfill its commitment to improve the practice of education, it cannot preclude creation of such important elements from its repertoire of possible activities.

4. According to recent studies, approximately 95% of instructional hours in American classrooms are devoted to and structured by instructional materials. Given this condition, NIE necessarily must concern itself with the nature of those programs and materials.

5. Instructional materials development is the most direct link between research and practice. Without it, practitioners would not be able to take full advantage of research findings. Therefore, NIE

should go beyond research, facilitation, and prototypic development to full-scale development based upon the results of research.

6. State, local, and private agencies can respond to local and regional needs but are not in a position to identify or address national needs. NIE as a Federal agency is in such a position and by virtue of its unique vantage point and resources, can and must address national problems that otherwise would go untended or that would not be addressed quickly enough.

7. NIE support of instructional materials development is required to provide more diversity in the programs available for use in local schools. Others--including publishers--can develop many programs, but they cannot provide all of the needed options.

8. The public is not in a position to compare current instructional programs with programs we are capable of producing. Therefore, NIE, as an agency in a position to make such determinations, must take an active leadership role in capitalizing on promising possibilities.

9. NIE, as a Federal agency, is in a better position to look to the Nation's long-term needs than are the private, State, and local sectors, and, therefore, must assist other agencies in identifying and addressing such needs.

10. Instructional materials development is essentially an engineering process, directed to the production of tools for teachers to use in realizing their objectives. Such development is very complex, requiring substantial amounts of expertise, experience, and time. Teachers rarely have all of these. Therefore, NIE should support teams of persons having the requisite competencies to develop, evaluate, disseminate, and correctly implement high-quality programs.

11. The active period of instructional program development over the past two decades yielded many valuable lessons about the process of educational reform. The momentum of that reform movement has been lost. It should be resumed, building on the foundation of skill and understanding resulting from past experience.

12. In terms of required per-pupil investment, instructional materials development is the most efficient means of effecting desired educational improvements. Therefore, responsible public stewardship requires support of such development.

13. A commitment to develop instructional programs entails a further commitment to evaluate, disseminate, and support implementation of programs produced. Without the proper, widespread use of Federally-sponsored programs, there is little justification for investing in development.

Some Possible Consequences of Policy Option #4: If this option were adopted, NIE undoubtedly would continue a high level of support for full-scale development, evaluation, dissemination, and implementation of instructional programs. Under Option #4, the Institute's basic stance and attitude toward development would be quite different: NIE would vigorously pursue leadership in this area, rather than sponsoring full-scale development only when certain restrictive conditions were met and when alternative activities (e.g., research, facilitation) were demonstrably inadequate. Also, because competition would be valued as a stimulus to improve work by others, Institute-sponsored developers might work in areas which overlap the work of others. NIE could support competitive development if others' work was judged unsatisfactory, not simply different.

As a logical corollary, under this option there would be less support for research activities, for efforts to strengthen others' capabilities, for efforts to facilitate or coordinate others' efforts, and for prototypic development than under Options #1, #2, and #3. Furthermore, it would be possible to begin with a consideration of support for full-scale development, rather than doing so only after less direct alternatives (e.g., research, facilitation) had been judged inadequate.

Basic researchers (in universities, colleges, private research organizations, R&D Centers) would receive less support under this option than they would under the others, as would agencies in a position to conduct various types of capacity-strengthening, facilitation, and coordination activities (SEAs, intermediate service agencies, Regional Laboratories, and possibly some LEAs). Substantially more support almost certainly would be given to development-oriented groups. At any given budget level, the Institute probably would fund fewer projects under this option than under the others, as full-scale development projects are more expensive than research, facilitation, and prototypic development.

Examples of projects that might receive funding under this policy option include all of those examples deemed eligible and ineligible under the three preceding options: the study of how people learn to read; the design of new procedures for local needs analysis; the creation of procedures and prototypic materials for state/local development of metric education programs; study and improvement of teachers' centers as settings for local development; development of a reading program for a small population of Indians; the development of prototypic materials for aesthetic education; and the development of a full-scale citizenship education program. Of course, support for none of these proposals would be guaranteed under this policy option, but none would be automatically ineligible. Selections would depend upon factors such as the magnitude of the opportunity for innovation, significance of the problem addressed, capabilities and experience of the projects' personnel, quality of the plans, and likelihood of achieving objectives.

Adoption of Option #4 likely would anger a number of groups and individuals. Opposition almost certainly would come from those who call for: minimal Federal involvement in this (and other) area(s); the termination of Federally-sponsored development projects; reduction of Federal influence on State and local decision-making authority; and an end to interference in the commercial materials market. Proponents of the view that basic research is the top priority today would oppose this option, particularly if they believe that no other agency but NIE is likely to sponsor such research. Option #4 also would make little sense to those who have become disenchanted with Federally-sponsored development projects and who argue that (1) enough new programs are now available for local adaptation and use and (2) a moratorium on Federally-sponsored development is advisable pending an assessment of past activities in light of present needs and circumstances. Moreover, many SEAs, LEAs, and intermediate service agencies likely would see fewer benefits to themselves under this option than under Options #2 and #3; there would be less money available for strengthening their own capabilities, for facilitating and coordinating their work, and for supporting the research upon which their efforts might be built. Finally, many publishers and other private developers are likely to oppose Option #4, arguing that what is needed is research and facilitation supports to strengthen their own work, not additional competition and duplication.

Support for Option #4 almost certainly would come from those who believe that many major improvements in instructional programs are needed and that these improvements cannot be made without Federal assistance. Development-oriented organizations which have spent years building teams of uniquely capable specialists are likely to support this option, as are those who believe that such institutionalized capabilities are a principal means of pursuing educational improvement.

III. DIRECTOR'S POLICY RECOMMENDATION

As indicated by the first and second sections of this report, the Institute staff has invested substantial time and effort in preparing the foundation for the Council's policy-making deliberations. Based upon input from many sources, the Task Force has identified and critically examined a wealth of issues, arguments, points of view, and conclusions of past experience and research. The NIE Executive Committee and other concerned Institute staff have analyzed the Task Force's findings, the major policy options presented in the preceding section, the arguments for and against each option, and the likely implications of each option for the Institute's character and activities.

On the basis of these analyses, we have come to believe that, while each option has certain virtues and articulate supporters, Option #3 is the most appropriate policy position for the Institute at this time. Many of the arguments for that option have been documented in earlier sections of the report and, therefore, we need not reiterate the full range of considerations. Instead, we simply will summarize the main reasons for our recommendation:

1.) As we explained in the discussion of Policy Option #3, almost every educational problem and opportunity the Institute may be called upon to address involves a unique combination of circumstances. Therefore, the most sensible policy for NIE is a flexible one which makes it possible to select the strategies that are most appropriate in the light of particular needs, available knowledge and technology, and willingness and ability of potential performers to do the required work. While the Institute's policies should make it more difficult to sponsor some activities than others, no potentially beneficial activities should be absolutely prohibited.

2.) While Policy Option #3 leaves a wide range of activities eligible for support, it does make explicit NIE's priorities, priorities which reflect the Institute's legislated mission, relationship to other educational and governmental agencies, program structure (which parallels the Congressional mandate and which is based on much advice from the field), and the views and wishes of many (if not most) of those who have expressed advice to the Institute over the past year and a half.

Essentially, as the policy option states, NIE's primary contribution to the improvement of instructional programs and materials is to sponsor (1) the conduct, synthesis, and dissemination of relevant research, (2) efforts to strengthen, facilitate, and coordinate others' work in improving instructional programs and materials, and (3) the prototypic development of new instructional programs and materials. Among these, research activities represent the Institute's highest priority, followed by efforts to strengthen, facilitate, or coordinate others' work, and then by prototypic development. Finally, full-scale development may be considered by NIE, but only for certain limited purposes and only when none of the primary activities will suffice. The explication of these priorities--coupled with the requirement that the Institute always begin with consideration of research, moving to other categories only when the inadequacy of activities in the first categories has been demonstrated convincingly--increases the probability that NIE will devote its resources to appropriate, needed activities that cannot be accomplished without its assistance.

3) The provision of necessary and discriminating criteria in Policy Option #3 increases the probability that (a) all Institute-sponsored activities in this area will meet certain minimal standards and (b) activities sponsored in each category (research, facilitation, prototypic development, full-scale development) will be based upon sound rationales, real needs, and solid support.

4) Policy Option #3 helps ensure that Institute-sponsored full-scale development will be consistent with Congressionally-mandated and widely-supported responsibilities for NIE: equalizing educational opportunities, assisting in the alleviation of important national problems, and ensuring that especially promising opportunities for educational improvement (made possible through the coincidence of major breakthroughs and the availability of particularly qualified personnel) are not lost.

5) The provision that substantial evidence of a program's promise at the prototypic stage must precede the decision to conduct full-scale development helps to ensure that the Institute's investments in full-scale program development will succeed.

6) NIE's current budget level effectively precludes the investments required in providing the active, broad-based leadership called for in Option #4.

7) Policy Option #3 requires various evaluations and Institute analyses at several points in the development process. These checks will provide a basis for withdrawing support of unacceptable work and for strengthening high-quality work that should be continued. Moreover, the required evaluations will yield information useful to consumers who must decide whether to adopt or reject the developed programs.

8) Similarly, the provision that no support be given for program dissemination or implementation unless (a) summative evaluations demonstrate high quality and effectiveness and (2) such support is required to meet the goal of equal educational opportunity or to meet the national need on which the development was based provides an appropriate check on the Institute's influence over state and local decision-making and ensures that NIE shall disseminate only products judged to be high in quality.

9) Policy Option #3 recognizes the important principles of (a) state and local control of education and (b) private enterprise by restricting Institute sponsorship of instructional program improvement activities to cases where a convincing demonstration makes clear that needed activities cannot be accomplished without NIE support.

10) We judge that most of the people who have expressed advice to NIE through the activities of the Curriculum Development Task Force would favor Policy Option #3 over the alternatives. Most people (a) recommended support of research, facilitation, and prototypic development, (b) favored support of some full-scale development under the conditions delineated in this option (equalization of educational opportunity, national need that others cannot meet, unique opportunities for improvement), and (c) would concur with the priorities reflected in the provision of more stringent criteria for support of more active, direct development activities.

On the basis of this rationale, the Director and his staff recommend adoption of the basic policy structure provided in Option #3: Support for all types of instructional program improvement activities (research, facilitation, prototypic development, and full-scale development) should be possible, but not guaranteed. Consideration of support for those activities should begin with the highest priority (research), advancing to lower priorities only when the inadequacy of higher priority activities in a given situation has been demonstrated. Additionally, criteria for support of lower priority activities should be more stringent. We realize, of course, that the particulars of this policy statement (e.g., language, specification of criteria) are likely to be refined in the Council's deliberations, but we consider the essential structure of Policy Option #3 to be most sound for NIE.

APPENDIX A

MEETINGS WITH PROFESSIONAL AND LAY ORGANIZATIONS, 1976-1977

Between January, 1976 (shortly after completion of the Task Force's first report) and January, 1977 (when this report to NCER was being prepared), the NIE Curriculum Development Task Force contacted dozens of organizations having a potential interest in discussing NIE's curriculum development policies and broader curriculum issues. Many organizations were not able to schedule meetings with the Task Force, but 37 did. Some of these were discussion sessions at organizations' annual meetings or conventions, some were meetings with executive councils or boards, some were discussions with especially interested committees, and some were meetings with organizations' regional chapters or affiliations. The 37 organizations with which the Task Force met in one way or another were:

American Association of School Administrators (AASA): October 20, 1976

American Educational Research Association (AERA): April 21, 1976

American Federation of Teachers (AFT): August 8, 1976

Aspira (New York City): September 30, 1976

Association of American Publishers (AAP): Setpember 1, 1976

Association for Childhood Education International: April 13, 1976

Association for Supervision and Curriculum Development (ASCD) March 15, 1976 and October 22, 1976

Association of Teacher Educators (ATE): February 4, 1976

Biological Sciences Curriculum Study (BSCS), Board of Directors: October 29, 1976

Center for Study of Parent Involvement: November 8, 1976

Center for Teaching International Relations: October 6, 1976 and October 21, 1976

Council for Educational Development and Research, Inc. (CEDaR): March 19, 1976 and October 21, 1976

Commission on Adult Basic Education: April 15, 1976

Council of Great City Schools: May 20, 1976

Education Commission of the States: October 22, 1976

Federal Interagency Committee on Education (FICE): several meetings

Illinois Association of Teachers of English: October 30, 1976

International Reading Association (IRA): October 7, 1976 and October 23, 1976

League of Women Voters, Georgia: December 12, 1976

Learning Research and Development Center (LRCD): October 21, 1976

National Art Education Association (NAEA): April 10, 1976 and September 18, 1976

National Association for the Advancement of Colored People (NAACP): December 12, 1976

National Association of Elementary School Principals (NAESP): September 25, 1976

National Association of Secondary School Principals (NASSP): October 1, 1976

National Association of State Boards of Education (NASBE): October 6, 1976

National Coalition of Title I Parents: November 11, 1976

National Committee for Citizens in Education (NCCE): September, 1976

National Congress of Parents and Teachers (PTA): May 24, 1976 and September 31, 1976

National Council for the Social Studies (NCSS): November 6, 1976

National Council of Teachers of English (NCTE): April 4, 1976

National Council of Teachers of Mathematics (NCTM): April 23, 1976; October 10, 1976; and November 11, 1976

National Education Association (NEA): February 24, 1976; October 4, 1976

National School Boards Association (NSBA): April 11-12, 1976

National School Volunteers Program: October 10, 1976

National Science Teachers Association (NSTA): October 1, 1976

Public Education Association (PEA; New York City): December 12, 1976

Research for Better Schools (RBS): December 8, 1976

APPENDIX B

REGIONAL PUBLIC MEETINGS

In December 1976 and January 1977 the Curriculum Development Task Force and the National Council on Educational Research (NCER) held public meetings in Philadelphia, Kansas City, Portland (Oregon), and San Francisco. The main purpose of these meetings was to provide interested citizens in various parts of the country with opportunities to discuss issues in curriculum development and to express policy advice to NIE. Two meetings, one in the afternoon and one in the evening, were held in each city. The sponsoring institutions listed below arranged advertising, meeting space, tape-recording, and the preparation of summary reports. The meetings were advertised through newspapers, television, radio, letters, posters, announcements, and invitations. Over 300 members of the public attended these meetings.

City	Date	Sponsor
Philadelphia	December 7, 1976	Research for Better Schools, Inc.
Kansas City	January 10, 1977	The Metropolitan Community Colleges
Portland, Oregon	January 11, 1977	Northwest Regional Educational Laboratory
San Francisco	January 12, 1977	Far West Regional Laboratory for Educational Research & Development

APPENDIX C

PARTICIPANTS, NOVEMBER 17-19, 1976, NIE CURRICULUM DEVELOPMENT CONFERENCE

On November 17, 18, and 19, 1976, the Curriculum Development Task Force sponsored a national conference in Washingtion, D. C. The purpose of the conference was to stimulate discussion of problems and issues in the field of curriculum and in the area of Federal participation among representatives of a wide range of interests, levels in the educational system, positions, and points of view. The participants included teachers, parents, principals, superintendents, school district curriculum specialists, school board members, representatives of professional associations and other educational organizations, State Department of Education staff, members of state boards of education, state legislators, members of state textbook adoption boards, scholars, policy analysts, journalists, representatives of private non-profit educational firms, representatives of Regional Laboratories and R & D Centers, Congressional staff, and representatives of Federal agencies, including NIE. Ralph W. Tyler served as Conference Chairman. A summary version of the proceedings has been prepared by Henry M. Brickell (of Policy Studies in Education; New York City) and a more detailed version of the proceedings has been prepared by Nel Noddings (of Los Altos, California).

Conference participants (other than NIE staff) included:

Judy Almquist (parent)
Robert Andringa (Committee on Education and Labor; U. S. House of Representatives)
George Archibald (American Legislative Exchange Council)
Philip Austin (Department of Health, Education and Welfare)
Stephen Bailey (American Council on Education)
Donald Barr (Hackley School)
Clarence Blount (State Senate of Maryland)
Mike Bowler (Baltimore Sun)
William Boyd (University of Rochester)
Ronald Brandt (Lincoln Public Schools)
Henry M. Brickell (Policy Studies in Education)
Harry S. Broudy (University of Illinois)
Gordon L. Brown (Illinois Office of Education)
William Brown (National Association of State Boards of Education)
Joel Burdin (American Association of Colleges for Teacher Education)
William Cannon (University of Chicago)
Jose Cardenas (Intercultural Development Research Association)
Frank Chase (Dallas Independent School District)
J. D. Clemmons (Department of Health, Education and Welfare)
Michael G. Cohan (Select Subcommittee on Education; U. S. House of Representatives)
Jesse Coles (South Carolina State Department of Education)
Larry Cuban (Arlington Public Schools)
Jerome Daen (National Science Foundation)
David Darland (National Education Association)
Joseph Dasbach (American Association for the Advancement of Science)
Robert Davis (University of Illinois)

Charles M. Dorn (National Art Education Association)
Peter Dow (Learning Design Associates)
Carl Dolce (North Carolina State University)
Jack Duncan (Select Subcommittee on Education; U. S. House of Representatives)
Denis Driscoll (University of Maryland)
Donald E. Egge (Oregon State Department of Education)
Elliot W. Eisner (Stanford University)
Todd Endo (Arlington Public Schools)
Richard Farrell (Office of Senator Lawton Childs; U. S. Senate)
Gloria Frazier (National Assessment of Educational Progress)
Gregory Fusco (Committee on Labor and Public Welfare; U. S. Senate)
Jean Frohlicher (Subcommittee on Education; U. S. Senate)
Marjorie Gardner (University of Maryland)
William Gaul (Committee on Education and Labor; U. S. House of Representatives)
James Gates (National Council of Teachers of Mathematics)
Thomas F. Green (Syracuse University)
John Hale (National Endowment for the Humanities)
Raymond Hannapel (National Science Foundation)
Carol Hodgson (American Vocational Association, Inc.)
Barbara Howell (Silver Burdett Company)
Paul Hurd (Stanford University)
David Justice (Fund for the Improvement of Postsecondary Education)
Ann Kahn (National PTA)
Herbert Kliebard (University of Wisconsin)
Joyce Lewis (Maine State Legislature)
David Lockard (University of Maryland)
John C. Maxwell (National Council of Teachers of English)
Ruby Martin (U. S. House of Representatives)
Onalee McGraw (National Coalition for Children)
Sterling M. McMurrin (University of Utah)
Roy Millenson (Association of American Publishers)
Robert Miller (U. S. Office of Education)
William Moore (Brightwood Elementary School)
Muriel Morisey (Office of Representative Shirley Chisholm)
Ellen Moyer (Maryland State Board of Education)
Nel Noddings (Los Altos, California)
Migdalie Romero de Ortiz (Hunter College)
Peggy Ott (American Association of School Administrators)
Judy Parsons (Parent)
Suzanne Quick (The Rand Corporation)
Elizabeth S. Randolph (Charlotte-Mecklenburg Schools)
Marilyn Rauth (American Federation of Teachers)
Lauren Resnick (Learning Research and Development Center)
Wade Robinson (CEMREL, Inc.)
Justin Rodriguez (Department of Health, Education and Welfare)
Stanley Salett (National Committe for Citizens in Education)
Richard Schutz (Southwest Regional Laboratory)

Edith Schwartz (California Curriculum Development and Supplementary Materials Committee)
David Seeley (Public Education Association)
Robert Segura (National Education Task Force de la Raza)
Lawrence Senesh (University of Colorado)
James Shaver (National Council for the Social Studies)
Ron Smith (Education Commission of the States)
Nelle H. Taylor (National Education Association)
Michael Timpane (The Rand Corporation)
John E. Tirrell (American Association of Community and Junior Colleges)
Marlene Torres (Department of Health, Education and Welfare)
J. Lloyd Trump (National Association of Secondary School Principals)
Ralph Tyler (Director Emeritus; Center for Advanced Study of the Behavioral Sciences)
John Valentine (College Entrance Examination Board)
Tyll Van Geel (The University of Rochester)
Decker F. Walker (Stanford University)
Lillian Weber (The City College Workshop Center for Open Education)
David L. Williams (University of Maryland)
Deborah Wolfe (National Alliance of Black School Educators)
Harry Wugalter (Governor's Cabinet; New Mexico)

APPENDIX D

DISTRIBUTION OF "NIE GUIDES FOR PUBLIC DISCUSSION"

In order to facilitate the understanding and discussion of NIE curriculum development policy issues and the expression of policy advice from interested persons, the Curriculum Development Task Force contracted with Henry M. Brickell and his colleagues at Policy Studies in Education in New York to develop a set of "Guides for Public Discussion." These guides delineated ten of the key policy issues, explained several alternative positions on each issue, and provided relevant background information. Additionally, each set contained a summary guide which respondents could use to express their policy preferences. Over 7,000 sets of guides were distributed to persons who expressed an interest in the Task Force's work, to persons who attended meetings with the Task Force, and to samples of the members of the following 77 organizations:

Adult Education Association of the USA

Advocates for Indian Education

American Anthropological Association

American Association for the Advancement of Science

American Association of Colleges of Teacher Education

American Association of Community and Junior Colleges

American Association for Higher Education

American Association of Physics Teachers

American Association of School Administrators

American Bar Association: Youth Education for Citizenship Program

American Chemical Society

American Council on Education

American Educational Research Association

American Federation of the Arts

American Federation of Labor - Congress of Industrial Organizations

American Federation of Teachers

American Institute of Biological Sciences

American Institutes for Research

American Vocational Association

Association of American Publishers

Association of American Universities

Association for Childhood Education International

Association for Supervision and Curriculum Development

Association of Teacher Educators

Bay Area Bilingual Education League

Bilingual Education Service Center

Carnegie Council on Policy Studies in Higher Education

Citizens United for Responsible Education

Coalition of Title I Parents

College Entrance Examination Board

Council for American Private Education

Council of Chief State School Officers

Council of Chief State School Officers' Outstanding Teachers, 1976, 1977

Council for Elementary Science International

Council for Exceptional Children

Council for Educational Development and Research, Inc.

Council of Great City Schools

Education Development Center, Inc.

Educational Media Council

Indian Education Training, Inc.

Institute for Black Child Development

Institute for Services to Education

Institute for Study of Educational Policy

International Reading Association

Joint Council on Economic Education

League of Women Voters, South Carolina

Let's Improve Today's Education

Mathematics Association of America

National Art Education Association

National Association of Biology Teachers

National Association of Educational Broadcasters

National Association of Elementary School Principals

National Association of Manufacturers

National Association for Public Continuing and Adult Education

National Association of Secondary School Principals

National Association of State Boards of Education

National Association of State Directors of Teacher Education and Certification

National Association of Student Councils

National Committee for Citizens in Education

National Congress for Educational Excellence

National Congress of Parents and Teachers

National Council of Churches

National Council of Negro Women

National Council for the Social Studies

National Council of Teachers of English

National Council of Teachers of Mathematics

National Indian Education Association

National Manpower Institute

National Organization of Women

National School Board Association

National School Volunteer Program, Inc.

National Science Teachers Association

National Student Lobby

National Urban Coalition

Rural Education Association

Spanish Curriculum Development Center

Student National Education Association

U. S. National Student Association

APPENDIX E

PAPERS COMMISSIONED BY THE CURRICULUM DEVELOPMENT TASK FORCE

In attempting to determine what has been learned from past experience and research relevant to NIE's curriculum policy issues, the Task Force commissioned 27 papers by scholars, policy analysts, practitioners, researchers, and curriculum developers. Papers were commissioned in three categories: (1) scholars' analyses of specified pertinent topics; (2) analyses of the key policy issues by individuals in a variety of positions representing a variety of points of view; and (3) reflections on "lessons" from experience and implications for policy by a wide variety of curriculum developers and persons who have conducted curriculum-related research.

The topics and writers were as follows:

I. Historical, Sociopolitical, and Technical Dimensions of Curriculum Development: Scholarly Examinations

William Boyd (The University of Rochester), "The Changing Politics of Curriculum Policy-Making for American Schools"

Larry Cuban (Superintendent, Arlington, Virginia Public Schools), "Forces Influencing Curriculum Change and Stability"

Marjorie Gardner (University of Maryland), "A Brief History of Federal Involvement in Curriculum Development"

Herbert Kliebard (University of Wisconsin), "Systematic Curriculum Development, 1890-1959: An Interpretive Survey"

Ralph Tyler (Science Research Associates), "Educational Improvements Best Served by Curriculum Development"

Tyll van Geel (The University of Rochester), "The New Law of the School Curriculum"

Decker Walker (Stanford University), "Approaches to Curriculum Development"

II. Curriculum Development Issues Facing NIE: Analytic Explorations

Donald Barr (Headmaster, The Hackley School)

Paul Brandwein (Harcourt Brace Jovanovich)

Joseph M. Cronin (State Superintendent of Education, Illinois)

Thomas F. Green (Syracuse University)

Jerrold R. Zacharias (Education Development Center)

III. Curriculum Development Experiences: "Lessons" Learned and Policy Implications

Ronald Brandt (Lincoln, Nebraska, Public Schools)

John B. Carroll (University of North Carolina)

Raymond English (Educational Research Council of America)

Arnold Grobman (University of Missouri, St. Louis)

David Hawkins (The Mountainview Center for Environmental Education)

Elton Hocking (Professor Emeritus, Purdue University)

Madeline Hunter (Principal, University Elementary School, UCLA)

John Mayor (University of Maryland)

Northwest Regional Educational Laboratory (Principal Author: Lawrence Fish, Director)

Samuel Postlethwait (Purdue University)

Lauren Resnick (Learning Research and Development Center, University of Pittsburgh)

Joseph J. Schwab (The Center for the Study of Democratic Institutions)

Lawrence Senesh (University of Colorado)

Southwest Regional Laboratory (Principal Author: Richard Schutz, Director)

James R. Squire (Ginn and Company)